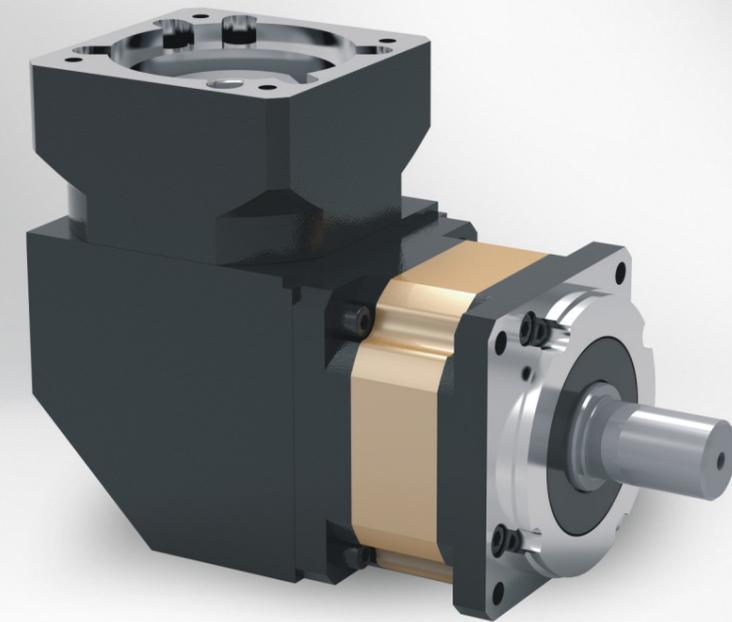


KVX

Powerful. High Precision. Reliable

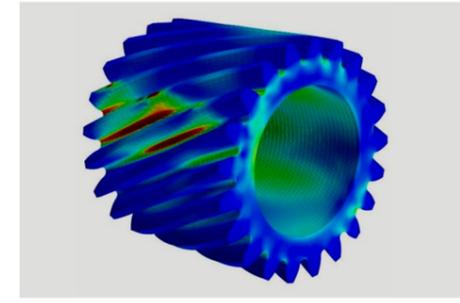
- ▶ Servo Planetary Gearbox
- Advanced Gearbox Solution





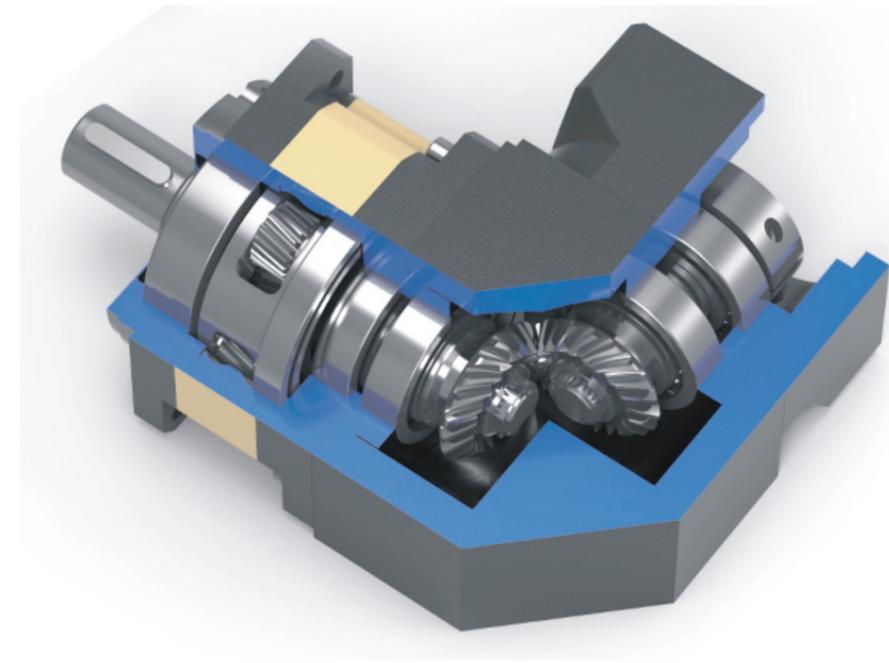
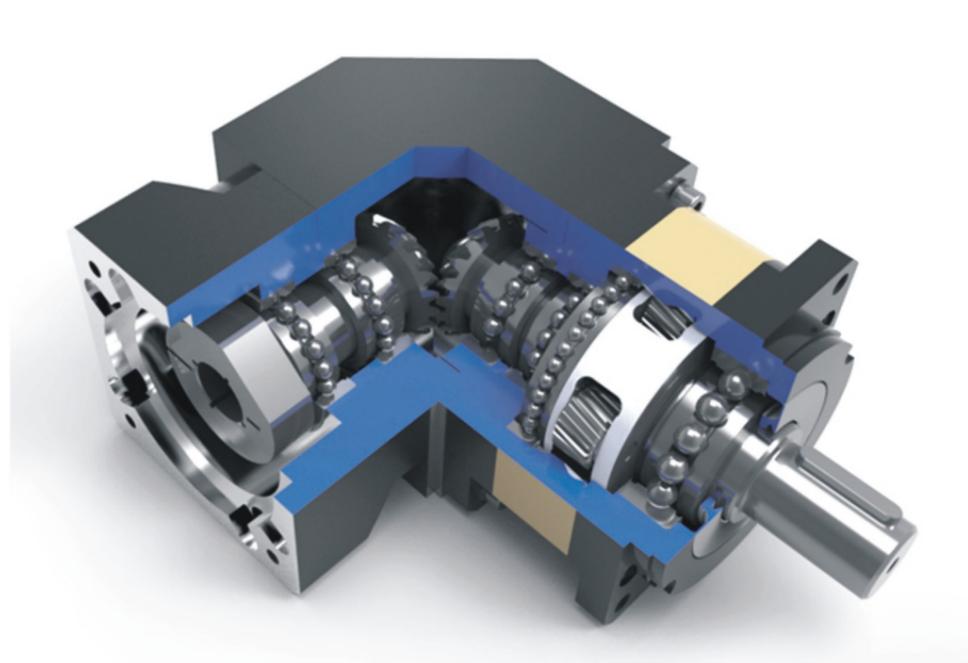
Helical Gear System Technology

Thanks to the tooth to tooth compact ratio more than 60%. The helical gearing and full needle bearing bring the benefits including higher torque capacity, smooth and lower noise running, decreased backlash and higher efficiency.



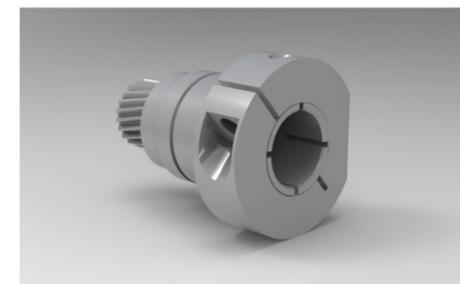
Super Gear Grinding and Heat Treatment Technology

The global leading gear grinding technology brings the great improvement for the tooth profile optimization, with the high level carburizing and quenching heat treatment technology to reach high precision and gear harden performance.



Master CageSpindle Planetary Carrier

The patented Master CageSpindle integrated planetary carrier support planetary gearbox to increase constructional strength running stability and rigidity significantly. Synthetic grease lubrication allows maintenance free for gearbox whole service life.



Dynamic Balance Clamping and Sealing System

For the gearbox input dynamic balance clamping design with perfect concentricity to decrease backlash and increase gearbox operation stability. The ultra sealing system offers grease leakage protection and support gearbox to reach IP65.

KVX Series Servo Planetary Gearbox

KVX Series Servo Planetary Gearbox

KVX065 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	15	52	55	50	50	45	42	42	
		in.lb	133	460	487	443	443	398	372	372	
Emergency Stop Torque	T_{2Not}	Nm	138	156	165	150	150	135	126	126	
		in.lb	1221	1381	1460	1328	1328	1195	1115	1115	
Maximum Acceleration Torque	T_{2B}	Nm	82.8	93.6	99	90	90	81	75.6	75.6	
		in.lb	733	828	876	797	797	717	669	669	
Maximum Torque	T_{2a}	Nm	92	104	110	100	100	90	84	84	
		in.lb	814	920	974	885	885	797	743	743	
Permitted Average Input Speed	n_{1N}	rpm	3000								
Maximum Input Speed	n_{1Max}	rpm	6000								
Mean No Load Running Torque	T_{012}	Nm	0.24	0.2	0.17	0.15	0.15	0.15	0.15	0.15	
		in.lb	2.12	1.77	1.50	1.33	1.33	1.33	1.33	1.33	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{121}	Nm/arcmin	3	3	3	3	3	3	3	3	
		in.lb/arcmin	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	
Maximum Radial Load	F_{2AMax}	N	1500								
		lb _r	337								
Maximum Axial Load	F_{2OMax}	N	760								
		lb _r	171								
Max. Tilting Moment	M_{2KMax}	Nm	40								
		in.lb	352								
Mass Moment of Inertia	j_1	kgcm ²	0.160	0.140	0.130	0.130	0.130	0.130	0.130	0.130	
Operating Noise Level	L_{PA}	dB(A)	< 63								
Efficiency at Full loading	η	%	95								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{10}	h	20,000(Continuous Operation)								
Weight	m	kg	2.2								
		lb _m	4.8								

KVX065 2-stage

		2-stage																	
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	64	80	90	100	
Nominal Output Torque		Nm	56	50	52	55	55	46	52	55	55	55	55	50	45	45	42	42	
		in.lb	496	443	460	487	487	407	460	487	487	487	487	487	443	398	398	372	372
Emergency Stop Torque	T_{2Not}	Nm	168	150	156	165	165	138	156	165	165	165	165	150	135	135	126	126	
		in.lb	1487	1328	1381	1460	1460	1221	1381	1460	1460	1460	1460	1328	1195	1195	1115	1115	
Maximum Acceleration Torque	T_{2B}	Nm	100.8	90	93.6	99	99	82.8	93.6	99	99	99	99	90	81	81	75.6	75.6	
		in.lb	892	797	828	876	876	733	828	876	876	876	876	797	717	717	669	669	
Maximum Torque	T_{2a}	Nm	112	100	104	110	110	92	104	110	110	110	110	100	90	90	84	84	
		in.lb	991	885	920	974	974	814	920	974	974	974	974	885	797	797	743	743	
Permitted Average Input Speed	n_{1N}	rpm	3000																
Maximum Input Speed	n_{1Max}	rpm	6000																
Mean No Load Running Torque	T_{012}	Nm	0.2	0.2	0.2	0.17	0.17	0.15	0.2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
		in.lb	1.77	1.77	1.77	1.50	1.50	1.33	1.77	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
Standard Backlash P1	j_1	arcmin	≤ 10																
Reduced Low Backlash P0	j_1	arcmin	≤ 7																
Torsional Rigidity	C_{121}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		in.lb/arcmin	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	26.55	
Maximum Radial Load	F_{2AMax}	N	1500																
		lb _r	337																
Maximum Axial Load	F_{2OMax}	N	760																
		lb _r	171																
Max. Tilting Moment	M_{2KMax}	Nm	80																
		in.lb	708																
Mass Moment of Inertia	j_1	kgcm ²	0.127	0.124	0.120	0.075	0.075	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.075	0.064	0.064	
Operating Noise Level	L_{PA}	dB(A)	< 63																
Efficiency at Full loading	η	%	95																
Operating Temperature		°C	-25 to +90																
		F	-13 to +194																
Lubrication			Synthetic Lubrication Grease																
Mouting Position			Any Directions																
Protection Class			IP 65																
Service lifetime	L_{10}	h	20,000(Continuous Operation)																
Weight	m	kg	2.4																
		lb _m	5.3																

KVX085 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	54	145	155	145	135	115	105	105	
		in.lb	478	1283	1372	1283	1195	1018	929	929	
Emergency Stop Torque	T_{2Not}	Nm	375	435	465	435	405	345	315	315	
		in.lb	3319	3850	4115	3850	3584	3053	2788	2788	
Maximum Acceleration Torque	T_{2B}	Nm	225	261	279	261	243	207	189	189	
		in.lb	1991	2310	2469	2310	2151	1832	1673	1673	
Maximum Torque	T_{2a}	Nm	250	290	310	290	270	230	210	210	
		in.lb	2213	2567	2744	2567	2390	2036	1859	1859	
Permitted Average Input Speed	n_{1N}	rpm	3000								
Maximum Input Speed	n_{1Max}	rpm	6000								
Mean No Load Running Torque	T_{012}	Nm	0.38	0.36	0.31	0.29	0.25	0.25	0.25	0.25	
		in.lb	3.36	3.19	2.74	2.57	2.21	2.21	2.21	2.21	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{121}	Nm/arcmin	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
		in.lb/arcmin	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	
Maximum Radial Load	F_{2Max}	N	3200								
		lb _r	719								
Maximum Axial Load	F_{2OMax}	N	1600								
		lb _r	360								
Max. Tilting Moment	M_{2KMax}	Nm	90								
		in.lb	792								
Mass Moment of Inertia	j_1	kgcm ²	0.61	0.48	0.47	0.47	0.47	0.45	0.44	0.44	
Operating Noise Level	L_{PA}	dB(A)	< 65								
Efficiency at Full loading	η	%	97								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{1h}	h	20,000(Continuous Operation)								
Weight	m	kg	5.3								
		lb _m	11.7								

KVX085 2-stage

		2-stage																		
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	64	80	90	100		
Nominal Output Torque		Nm	125	125	145	145	155	125	145	155	155	155	155	145	115	115	105	105		
		in.lb	1106	1106	1283	1283	1372	1106	1283	1372	1372	1372	1372	1283	1018	1018	929	929		
Emergency Stop Torque	T_{2Not}	Nm	375	375	435	435	465	375	435	465	465	465	465	435	345	345	315	315		
		in.lb	3319	3319	3850	3850	4115	3319	3850	4115	4115	4115	4115	3850	3053	3053	2788	2788		
Maximum Acceleration Torque	T_{2B}	Nm	225	225	261	261	279	225	261	279	279	279	279	261	207	207	189	189		
		in.lb	1991	1991	2310	2310	2469	1991	2310	2469	2469	2469	2469	2310	1832	1832	1673	1673		
Maximum Torque	T_{2a}	Nm	250	250	290	290	310	250	290	310	310	310	310	290	230	230	210	210		
		in.lb	2213	2213	2567	2567	2744	2213	2567	2744	2744	2744	2744	2567	2036	2036	1859	1859		
Permitted Average Input Speed	n_{1N}	rpm	3000																	
Maximum Input Speed	n_{1Max}	rpm	6000																	
Mean No Load Running Torque	T_{012}	Nm	0.36	0.27	0.36	0.31	0.31	0.31	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		
		in.lb	3.19	2.39	3.19	2.74	2.74	2.74	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21		
Standard Backlash P1	j_1	arcmin	≤ 10																	
Reduced Low Backlash P0	j_1	arcmin	≤ 7																	
Torsional Rigidity	C_{121}	Nm/arcmin	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8		
		in.lb/arcmin	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48	42.48		
Maximum Radial Load	F_{2AMax}	N	3200																	
		lb _r	719																	
Maximum Axial Load	F_{2OMax}	N	1600																	
		lb _r	360																	
Max. Tilting Moment	M_{2KMax}	Nm	200																	
		in.lb	1770																	
Mass Moment of Inertia	j_1	kgcm ²	0.44	0.44	0.43	0.44	0.44	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.44	0.39	0.44		
Operating Noise Level	L_{PA}	dB(A)	< 65																	
Efficiency at Full loading	η	%	95																	
Operating Temperature		°C	-25 to +90																	
		F	-13 to +194																	
Lubrication			Synthetic Lubrication Grease																	
Mouting Position			Any Directions																	
Protection Class			IP 65																	
Service lifetime	L_{1h}	h	20,000(Continuous Operation)																	
Weight	m	kg	6.5																	
		lb _m	14.3																	

KVX115 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	120	300	320	300	290	255	220	220	
		in.lb	1062	2655	2832	2655	2567	2257	1947	1947	
Emergency Stop Torque	T_{2Not}	Nm	630	900	960	900	870	765	660	660	
		in.lb	5576	7965	8496	7965	7700	6770	5841	5841	
Maximum Acceleration Torque	T_{2B}	Nm	378	540	576	540	522	459	396	396	
		in.lb	3345	4779	5098	4779	4620	4062	3505	3505	
Maximum Torque	T_{2a}	Nm	420	600	640	600	580	510	440	440	
		in.lb	3717	5310	5664	5310	5133	4514	3894	3894	
Permitted Average Input Speed	n_{1N}	rpm	3000								
Maximum Input Speed	n_{1Max}	rpm	6000								
Mean No Load Running Torque	T_{012}	Nm	1	0.95	0.85	0.81	0.78	0.78	0.78	0.78	
		in.lb	8.85	8.41	7.52	7.17	6.90	6.90	6.90	6.90	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{121}	Nm/arcmin	10	10	10	10	10	10	10	10	
		in.lb/arcmin	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	
Maximum Radial Load	F_{2AMax}	N	6700								
		lb _r	1506								
Maximum Axial Load	F_{2OMax}	N	3300								
		lb _r	742								
Max. Tilting Moment	M_{2KMax}	Nm	150								
		in.lb	1320								
Mass Moment of Inertia	j_1	kgcm ²	3.25	2.74	2.71	2.71	2.62	2.62	2.62	2.57	
Operating Noise Level	L_{PA}	dB(A)	< 68								
Efficiency at Full loading	η	%	95								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{10}	h	20,000(Continuous Operation)								
Weight	m	kg	9								
		lb _m	19.8								

KVX115 2-stage

		2-stage																		
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	64	80	90	100		
Nominal Output Torque		Nm	310	310	300	300	320	210	305	320	320	320	320	300	255	255	220	220		
		in.lb	2744	2744	2655	2655	2832	1859	2699	2832	2832	2832	2832	2655	2257	2257	1947	1947		
Emergency Stop Torque	T_{2Not}	Nm	930	930	900	900	960	630	915	960	960	960	960	900	765	765	660	660		
		in.lb	8231	8231	7965	7965	8496	5576	8098	8496	8496	8496	8496	7965	6770	6770	5841	5841		
Maximum Acceleration Torque	T_{2B}	Nm	558	558	540	540	576	378	549	576	576	576	576	540	459	459	396	396		
		in.lb	4938	4938	4779	4779	5098	3345	4859	5098	5098	5098	5098	4779	4062	4062	3505	3505		
Maximum Torque	T_{2a}	Nm	620	620	600	600	640	420	610	640	640	640	640	600	510	510	440	440		
		in.lb	5487	5487	5310	5310	5664	3717	5399	5664	5664	5664	5664	5310	4514	4514	3894	3894		
Permitted Average Input Speed	n_{1N}	rpm	3000																	
Maximum Input Speed	n_{1Max}	rpm	6000																	
Mean No Load Running Torque	T_{012}	Nm	0.95	0.85	0.95	0.85	0.85	0.85	0.85	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78		
		in.lb	8.41	7.52	8.41	7.52	7.52	7.52	7.52	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90		
Standard Backlash P1	j_1	arcmin	≤ 10																	
Reduced Low Backlash P0	j_1	arcmin	≤ 7																	
Torsional Rigidity	C_{121}	Nm/arcmin	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
		in.lb/arcmin	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50		
Maximum Radial Load	F_{2AMax}	N	6700																	
		lb _r	1506																	
Maximum Axial Load	F_{2OMax}	N	3300																	
		lb _r	742																	
Max. Tilting Moment	M_{2KMax}	Nm	400																	
		in.lb	3540																	
Mass Moment of Inertia	j_1	kgcm ²	2.56	2.58	1.75	1.5	1.49	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.49	1.45		
Operating Noise Level	L_{PA}	dB(A)	< 68																	
Efficiency at Full loading	η	%	92																	
Operating Temperature		°C	-25 to +90																	
		F	-13 to +194																	
Lubrication			Synthetic Lubrication Grease																	
Mouting Position			Any Directions																	
Protection Class			IP 65																	
Service lifetime	L_{10}	h	20,000(Continuous Operation)																	
Weight	m	kg	13																	
		lb _m	28.6																	

KVX142 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	270	550	650	610	540	510	440	440	
		in.lb	2390	4868	5753	5399	4779	4514	3894	3894	
Emergency Stop Torque	T_{2Not}	Nm	1050	1650	1950	1830	1620	1530	1320	1320	
		in.lb	9293	14603	17258	16196	14337	13541	11682	11682	
Maximum Acceleration Torque	T_{2B}	Nm	630	990	1170	1098	972	918	792	792	
		in.lb	5576	8762	10355	9717	8602	8124	7009	7009	
Maximum Torque	T_{2a}	Nm	700	1100	1300	1220	1080	1020	880	880	
		in.lb	6195	9735	11505	10797	9558	9027	7788	7788	
Permitted Average Input Speed	n_{1N}	rpm	3000								
Maximum Input Speed	n_{1Max}	rpm	6000								
Mean No Load Running Torque	T_{012}	Nm	2.55	2.45	2.3	2.2	2.2	2.2	2.2	2.2	
		in.lb	22.57	21.68	20.36	19.47	19.47	19.47	19.47	19.47	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{121}	Nm/arcmin	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	
		in.lb/arcmin	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	
Maximum Radial Load	F_{2AMax}	N	9600								
		lb _r	2157								
Maximum Axial Load	F_{2OMax}	N	4800								
		lb _r	1079								
Max. Tilting Moment	M_{2KMax}	Nm	480								
		in.lb	4224								
Mass Moment of Inertia	j_1	kgcm ²	12.31	7.54	7.42	7.42	7.25	7.14	7.14	7.14	
Operating Noise Level	L_{PA}	dB(A)	< 70								
Efficiency at Full loading	η	%	95								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{1h}	h	20,000(Continuous Operation)								
Weight	m	kg	26								
		lb _m	57.2								

KVX142 2-stage

		2-stage																		
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	63	64	80	90	100	
Nominal Output Torque		Nm	500	500	550	650	650	450	550	650	550	650	650	610	510	510	440	440	440	
		in.lb	4425	4425	4868	5753	5753	3983	4868	5753	4868	5753	5753	5399	4514	4514	3894	3894		
Emergency Stop Torque	T_{2Not}	Nm	1500	1500	1650	1950	1950	1350	1650	1950	1650	1950	1950	1830	1530	1530	1320	1320		
		in.lb	13275	13275	14603	17258	17258	11948	14603	17258	14603	17258	17258	16196	13541	13541	11682	11682		
Maximum Acceleration Torque	T_{2B}	Nm	900	900	990	1170	1170	810	990	1170	990	1170	1170	1098	918	918	792	792		
		in.lb	7965	7965	8762	10355	10355	7169	8762	10355	8762	10355	10355	9717	8124	8124	7009	7009		
Maximum Torque	T_{2a}	Nm	1000	1000	1100	1300	1300	900	1100	1300	1100	1300	1300	1220	1020	1020	880	880		
		in.lb	8850	8850	9735	11505	11505	7965	9735	11505	9735	11505	11505	10797	9027	9027	7788	7788		
Permitted Average Input Speed	n_{1N}	rpm	3000																	
Maximum Input Speed	n_{1Max}	rpm	6000																	
Mean No Load Running Torque	T_{012}	Nm	2.45	2.3	2.45	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
		in.lb	21.68	20.36	21.68	20.36	20.36	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	
Standard Backlash P1	j_1	arcmin	≤ 10																	
Reduced Low Backlash P0	j_1	arcmin	≤ 7																	
Torsional Rigidity	C_{121}	Nm/arcmin	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	
		in.lb/arcmin	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	254.00	
Maximum Radial Load	F_{2AMax}	N	9600																	
		lb _r	2157																	
Maximum Axial Load	F_{2OMax}	N	4800																	
		lb _r	1079																	
Max. Tilting Moment	M_{2KMax}	Nm	850																	
		in.lb	7522.5																	
Mass Moment of Inertia	j_1	kgcm ²	12.35	12.35	7.47	6.65	5.81	6.34	6.34	5.36	4.08	5.36	4.08	7.4	7.5	7.5	7.4	7.4		
Operating Noise Level	L_{PA}	dB(A)	< 70																	
Efficiency at Full loading	η	%	92																	
Operating Temperature		°C	-25 to +90																	
		F	-13 to +194																	
Lubrication			Synthetic Lubrication Grease																	
Mouting Position			Any Directions																	
Protection Class			IP 65																	
Service lifetime	L_{1h}	h	20,000(Continuous Operation)																	
Weight	m	kg	31																	
		lb _m	68.2																	

KVX180 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	450	1250	1200	1000	1000	1000	910	910	
		in.lb	3983	11063	10620	8850	8850	8850	8054	8054	
Emergency Stop Torque	T_{2Not}	Nm	1950	3750	3600	3000	3000	3000	2730	2730	
		in.lb	17258	33188	31860	26550	26550	26550	24161	24161	
Maximum Acceleration Torque	T_{2B}	Nm	1170	2250	2160	1800	1800	1800	1638	1638	
		in.lb	10355	19913	19116	15930	15930	15930	14496	14496	
Maximum Torque	T_{2a}	Nm	1300	2500	2400	2000	2000	2000	1820	1820	
		in.lb	11505	22125	21240	17700	17700	17700	16107	16107	
Permitted Average Input Speed	n_{1N}	rpm	1500								
Maximum Input Speed	n_{1Max}	rpm	3000								
Mean No Load Running Torque	T_{012}	Nm	4	3.8	3.55	3.5	3.5	3.5	3.5	3.5	
		in.lb	35.40	33.63	31.42	30.98	30.98	30.98	30.98	30.98	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{121}	Nm/arcmin	120	120	120	120	120	120	120	120	
		in.lb/arcmin	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	
Maximum Radial Load	F_{2AMax}	N	14000								
		lb _r	3146								
Maximum Axial Load	F_{2OMax}	N	7000								
		lb _r	1573								
Max. Tilting Moment	M_{2KMax}	Nm	1300								
		in.lb	11440								
Mass Moment of Inertia	j_1	kgcm ²	28.98	23.67	22.75	22.75	22.48	22.59	22.59	22.55	
Operating Noise Level	L_{PA}	dB(A)	< 72								
Efficiency at Full loading	η	%	95								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{1h}	h	20,000(Continuous Operation)								
Weight	m	kg	41								
		lb _m	90.2								

KVX180 2-stage

		2-stage																		
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	64	80	90	100		
Nominal Output Torque		Nm	650	850	1250	1200	1200	650	1250	1200	1200	1200	1200	1000	1000	1000	910	910		
		in.lb	5753	7523	11063	10620	10620	5753	11063	10620	10620	10620	10620	8850	8850	8850	8054	8054		
Emergency Stop Torque	T_{2Not}	Nm	1950	2550	3750	3600	3600	1950	3750	3600	3600	3600	3600	3000	3000	3000	2730	2730		
		in.lb	17258	22568	33188	31860	31860	17258	33188	31860	31860	31860	31860	26550	26550	26550	24161	24161		
Maximum Acceleration Torque	T_{2B}	Nm	1170	1530	2250	2160	2160	1170	2250	2160	2160	2160	2160	1800	1800	1800	1638	1638		
		in.lb	10355	13541	19913	19116	19116	10355	19913	19116	19116	19116	19116	15930	15930	15930	14496	14496		
Maximum Torque	T_{2a}	Nm	1300	1700	2500	2400	2400	1300	2500	2400	2400	2400	2400	2000	2000	2000	1820	1820		
		in.lb	11505	15045	22125	21240	21240	11505	22125	21240	21240	21240	21240	17700	17700	17700	16107	16107		
Permitted Average Input Speed	n_{1N}	rpm	1500																	
Maximum Input Speed	n_{1Max}	rpm	3000																	
Mean No Load Running Torque	T_{012}	Nm	2.45	2.3	2.45	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2		
		in.lb	21.68	20.36	21.68	20.36	20.36	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47	19.47		
Standard Backlash P1	j_1	arcmin	≤ 10																	
Reduced Low Backlash P0	j_1	arcmin	≤ 7																	
Torsional Rigidity	C_{121}	Nm/arcmin	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120		
		in.lb/arcmin	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00	1062.00		
Maximum Radial Load	F_{2AMax}	N	14000																	
		lb _r	3146																	
Maximum Axial Load	F_{2OMax}	N	7000																	
		lb _r	1573																	
Max. Tilting Moment	M_{2KMax}	Nm	1280																	
		in.lb	11328																	
Mass Moment of Inertia	j_1	kgcm ²	12.35	12.3	7.54	7.42	7.54	7.14	7.14	7.14	22.55	7.14	7.14	7.14	7.54	7.54	7.42	7.42		
Operating Noise Level	L_{PA}	dB(A)	< 72																	
Efficiency at Full loading	η	%	95																	
Operating Temperature		°C	-25 to +90																	
		F	-13 to +194																	
Lubrication			Synthetic Lubrication Grease																	
Mouting Position			Any Directions																	
Protection Class			IP 65																	
Service lifetime	L_{1h}	h	20,000(Continuous Operation)																	
Weight	m	kg	49																	
		lb _m	107.8																	

KVX220 1-stage

		1-stage									
Ratio	i		3	4	5	6	7	8	9	10	
Nominal Output Torque		Nm	800	1800	2050	1850	1750	1550	1500	1500	
		in.lb	7080	15930	18143	16373	15488	13718	13275	13275	
Emergency Stop Torque	T_{2Not}	Nm	3600	5400	6150	5550	5250	4650	4500	4500	
		in.lb	31860	47790	54428	49118	46463	41153	39825	39825	
Maximum Acceleration Torque	T_{2B}	Nm	2160	3240	3690	3330	3150	2790	2700	2700	
		in.lb	19116	28674	32657	29471	27878	24692	23895	23895	
Maximum Torque	T_{2a}	Nm	2400	3600	4100	3700	3500	3100	3000	3000	
		in.lb	21240	31860	36285	32745	30975	27435	26550	26550	
Permitted Average Input Speed	n_{1N}	rpm	1500								
Maximum Input Speed	n_{1Max}	rpm	3000								
Mean No Load Running Torque	T_{012}	Nm	6	5.7	5.5	5.17	5.17	5.17	5.17	5.17	
		in.lb	53.10	50.45	48.68	45.75	45.75	45.75	45.75	45.75	
Standard Backlash P1	j_1	arcmin	≤ 8								
Reduced Low Backlash P0	j_1	arcmin	≤ 5								
Torsional Rigidity	C_{21}	Nm/arcmin	200	200	200	200	200	200	200	200	
		in.lb/arcmin	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	
Maximum Radial Load	F_{2AMax}	N	16000								
		lb _f	3596								
Maximum Axial Load	F_{2OMax}	N	8000								
		lb _f	1798								
Max. Tilting Moment	M_{2KMax}	Nm	1800								
		in.lb	15840								
Mass Moment of Inertia	j_1	kgcm ²	69.61	54.37	53.27	53.27	50.84	50.84	50.84	50.56	
Operating Noise Level	L_{PA}	dB(A)	< 75								
Efficiency at Full loading	η	%	95								
Operating Temperature		°C	-25 to +90								
		F	-13 to +194								
Lubrication			Synthetic Lubrication Grease								
Mouting Position			Any Directions								
Protection Class			IP 65								
Service lifetime	L_{1h}	h	20,000(Continuous Operation)								
Weight	m	kg	68								
		lb _m	149.6								

KVX220 2-stage

		2-stage																		
Ratio	i		12	15	16	20	25	30	32	35	40	45	50	60	64	80	90	100		
Nominal Output Torque		Nm	1200	1200	1800	2050	2050	1200	1800	2050	2050	2050	2050	1850	1550	1550	1500	1500		
		in.lb	10620	10620	15930	18143	18143	10620	15930	18143	18143	18143	18143	16373	13718	13718	13275	13275		
Emergency Stop Torque	T_{2Not}	Nm	3600	3600	5400	6150	6150	3600	5400	6150	6150	6150	6150	5550	4650	4650	4500	4500		
		in.lb	31860	31860	47790	54428	54428	31860	47790	54428	54428	54428	54428	49118	41153	41153	39825	39825		
Maximum Acceleration Torque	T_{2B}	Nm	2160	2160	3240	3690	3690	2160	3240	3690	3690	3690	3690	3330	2790	2790	2700	2700		
		in.lb	19116	19116	28674	32657	32657	19116	28674	32657	32657	32657	32657	29471	24692	24692	23895	23895		
Maximum Torque	T_{2a}	Nm	2400	2400	3600	4100	4100	2400	3600	4100	4100	4100	4100	3700	3100	3100	3000	3000		
		in.lb	21240	21240	31860	36285	36285	21240	31860	36285	36285	36285	36285	32745	27435	27435	26550	26550		
Permitted Average Input Speed	n_{1N}	rpm	1500																	
Maximum Input Speed	n_{1Max}	rpm	3000																	
Mean No Load Running Torque	T_{012}	Nm	3.8	3.15	3.8	3.55	3.55	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
		in.lb	33.63	27.88	33.63	31.42	31.42	30.98	30.98	30.98	30.98	30.98	30.98	30.98	30.98	30.98	30.98	30.98		
Standard Backlash P1	j_1	arcmin	≤ 10																	
Reduced Low Backlash P0	j_1	arcmin	≤ 7																	
Torsional Rigidity	C_{21}	Nm/arcmin	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200		
		in.lb/arcmin	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00	1770.00		
Maximum Radial Load	F_{2AMax}	N	16000																	
		lb _f	3596																	
Maximum Axial Load	F_{2OMax}	N	8000																	
		lb _f	1798																	
Max. Tilting Moment	M_{2KMax}	Nm	2350																	
		in.lb	20797.5																	
Mass Moment of Inertia	j_1	kgcm ²	28.98	28.92	23.67	22.75	22.75	22.75	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.75	22.59			
Operating Noise Level	L_{PA}	dB(A)	< 75																	
Efficiency at Full loading	η	%	92																	
Operating Temperature		°C	-25 to +90																	
		F	-13 to +194																	
Lubrication			Synthetic Lubrication Grease																	
Mouting Position			Any Directions																	
Protection Class			IP 65																	
Service lifetime	L_{1h}	h	20,000(Continuous Operation)																	
Weight	m	kg	78																	
		lb _m	171.6																	

