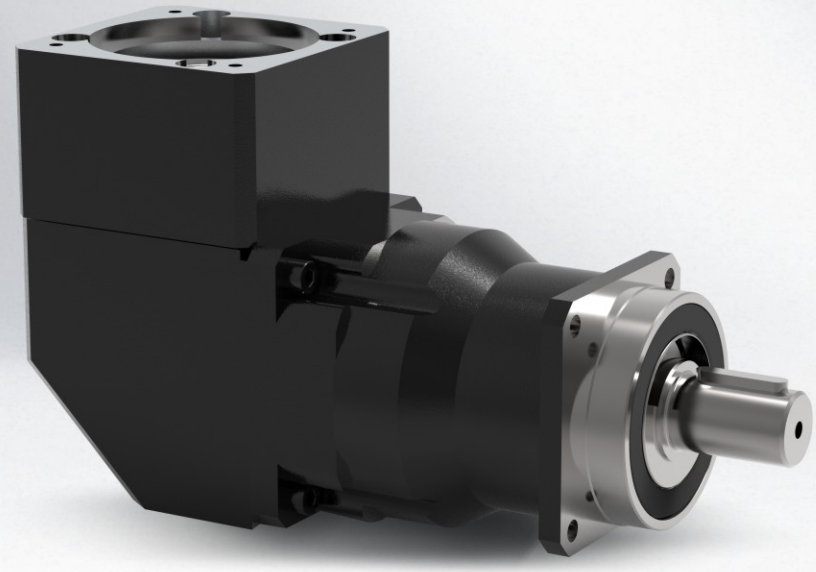
KOFON® Drive the World | CaesarPlanetary®

KVG

Powerful. High Precision. Reliable

- Servo Planetary Gearbox

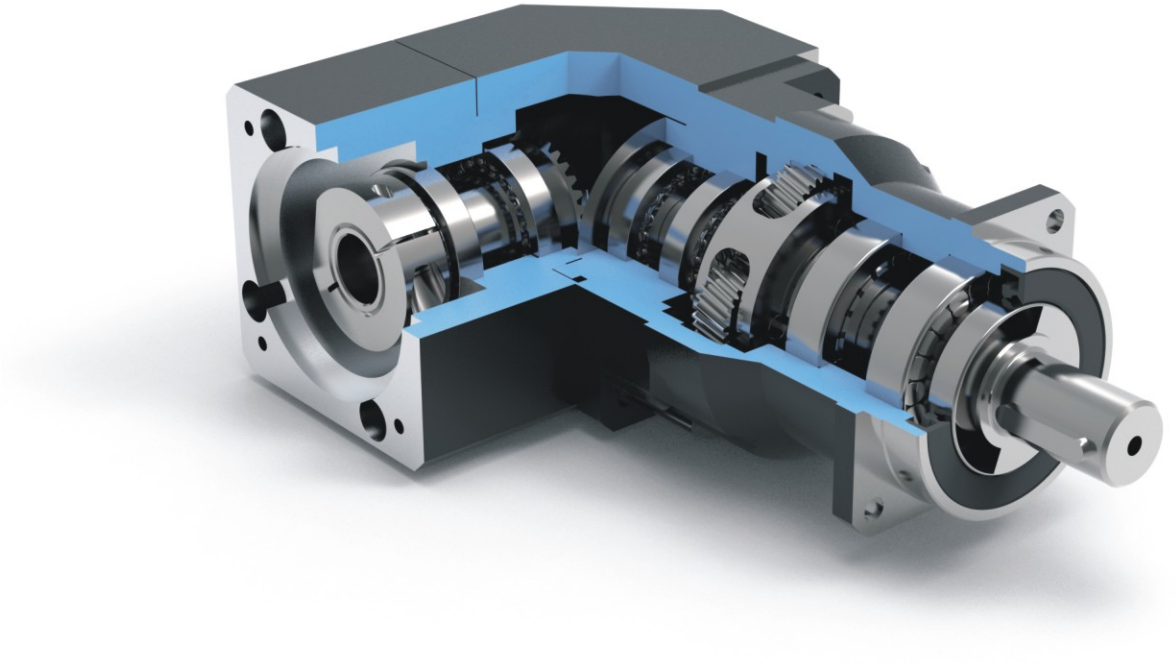
Advanced Gearbox Solution





Helical Gear System Technology

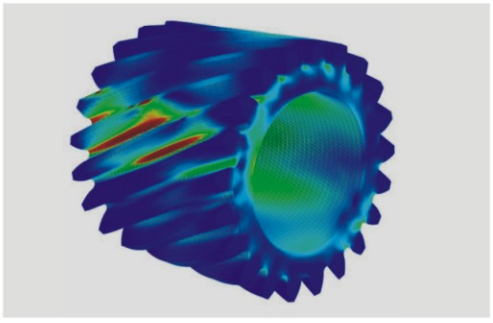
Thanks to the tooth to tooth compact ratio more than 60%.The helical gearing and full needle bearing bring the benefits including higher torque capacity, smooth and lower noise running, decreased backlash and higher efficiency. Integrated housing engineering with super skiving gearing tooling craft.





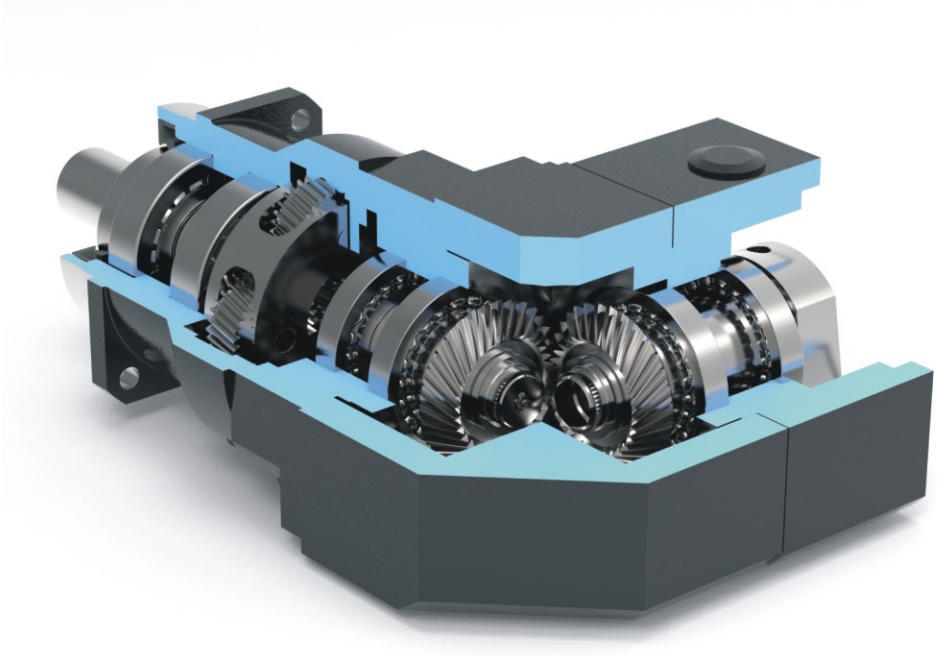
Master CageSpindle Planetary Carrier

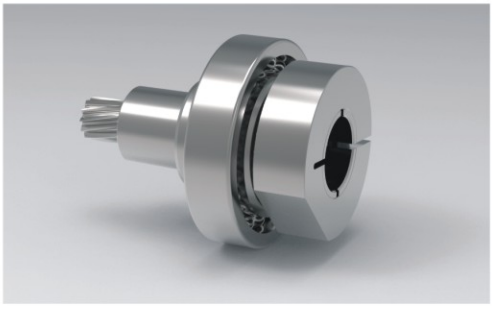
The patented Master CageSpindle integrated planetary carrier support planetary gearbox to increase constructional strength running stability and rigidity significantly. Synthetic grease lubrication allows maintenance free for gearbox whole service life.



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.





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.

Order Instructions

Order Code:

KVG — 120 — 02 — 015 — P0 — Servo Motor

KVG

Gearbox Series: KVG

120

Gearbox Size

02

Gearbox Stage

015

Gearbox Ratio

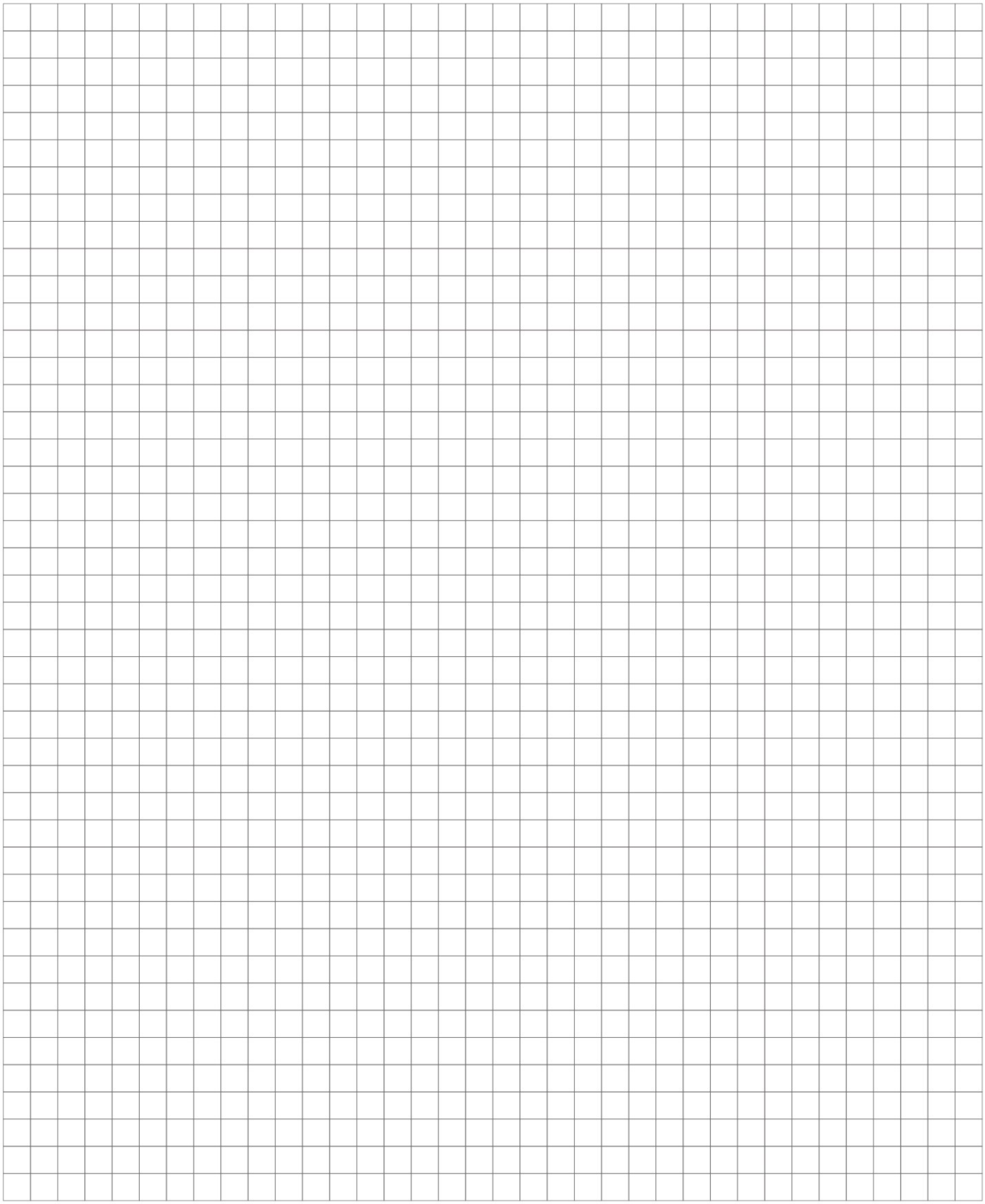
P0

Gearbox Precision

Servo Motor

Motor Manufacturer and model

Technical Memo



KVG070 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	46	52	55	50	50	45	42	42
		in.lb	407	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*	83	94	99	90	90	81	76	76
		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*	0.35	0.32	0.3	0.3	0.3	0.3	0.3	0.3
		in.lb	3.10	2.83	2.66	2.66	2.66	2.66	2.66	2.66
Standard Backlash P1	j_t	arcmin	⩽7							
Reduced Low Backlash P0	j_t	arcmin	⩽5							
Ultra Low Backlash PU	j_t	arcmin	⩽3							
Torsional Rigidity	C_{t21}	*Nm/arcmin*	7							
		in.lb/arcmin	61.95							
Maximum Radial Load	F_{2AMax}	*N*	4300							
		lb_f	967							
Maximum Axial Load	F_{2QMax}	*N*	3900							
		lb_f	877							
Max. Tilting Moment	M_{2KMax}	*Nm*	227							
		in.lb	2009							
Mass Moment of Inertia	j_1	$kgcm^2$	0.16	0.093	0.078	0.07	0.069	0.065	0.065	0.065
Operating Noise Level	L_{PA}	dB(A)	< 63							
Efficiency at Full loading	η	%	95							
Operating Temperature		℃	−25 to +90							
		F	−13 to +194							
Lubrication			Synthetic Lubrication Grease							
Mouting Position			Any Directions							
Protection Class			IP 65							
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Weight	*m*	kg	4.6							
		lb_m	10.14							

KVG070 2-stage

			2-stage												
Ratio	i		15	20	25	30	35	40	45	50	60	70	80	90	100
Nominal Output Torque		Nm	46	52	55	55	55	55	55	55	50	50	45	42	42
		in.lb	407	460	487	487	487	487	487	487	443	443	398	372	372
Emergency Stop Torque	T_{2Not}	*Nm*	138	156	165	165	165	165	165	165	150	150	135	126	126
		in.lb	1221	1381	1460	1460	1460	1460	1460	1460	1328	1328	1195	1115	1115
Maximum Acceleration Torque	T_{2B}	*Nm*	83	94	99	99	99	99	99	99	90	90	81	76	76
		in.lb	733	828	876	876	876	876	876	876	797	797	717	669	669
Maximum Torque	T_{2a}	*Nm*	92	104	110	110	110	110	110	110	100	100	90	84	84
		in.lb	814	920	974	974	974	974	974	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*	0.32	0.32	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
		in.lb	2.83	2.83	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
Standard Backlash P1	j_t	arcmin	≤9												
Reduced Low Backlash P0	j_t	arcmin	≤7												
Ultra Low Backlash PU	j_t	arcmin	≤5												
Torsional Rigidity	C_{t21}	*Nm/arcmin*	7												
		in.lb/arcmin	61.95												
Maximum Radial Load	F_{2AMax}	*N*	4300												
		lb_f	967												
Maximum Axial Load	F_{2QMax}	*N*	3900												
		lb_f	877												
Max. Tilting Moment	M_{2KMax}	*Nm*	227												
		in.lb	2009												
Mass Moment of Inertia	j_1	$kgcm^2$	0.088	0.075	0.075	0.064	0.064	0.064	0.064	0.064	0.064	0.075	0.064	0.064	0.064
Operating Noise Level	L_{PA}	dB(A)	< 63												
Efficiency at Full loading	η	%	93												
Operating Temperature		℃	−25 to +90												
		F	−13 to +194												
Lubrication			Synthetic Lubrication Grease												
Mouting Position			Any Directions												
Protection Class			IP 65												
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)												
Weight	*m*	kg	7												
		lb_m	15.43												

KVG090 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	125	145	155	145	135	115	105	105
		in.lb	1106	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	4116	3850	3585	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*	0.51	0.46	0.44	0.4	0.4	0.4	0.4	0.4
		in.lb	4.51	4.07	3.89	3.54	3.54	3.54	3.54	3.54
Standard Backlash P1	j_t	arcmin	⩽7							
Reduced Low Backlash P0	j_t	arcmin	⩽5							
Ultra Low Backlash PU	j_t	arcmin	⩽3							
Torsional Rigidity	C_{t21}	*Nm/arcmin*	14							
		in.lb/arcmin	123.91							
Maximum Radial Load	F_{2AMax}	*N*	7000							
		lb_f	1574							
Maximum Axial Load	F_{2QMax}	*N*	6300							
		lb_f	1416							
Max. Tilting Moment	M_{2KMax}	*Nm*	440							
		in.lb	3894							
Mass Moment of Inertia	j_1	$kgcm^2$	0.61	0.52	0.45	0.42	0.40	0.39	0.39	0.39
Operating Noise Level	L_{PA}	dB(A)	< 65							
Efficiency at Full loading	η	%	95							
Operating Temperature		℃	−25 to +90							
		F	−13 to +194							
Lubrication			Synthetic Lubrication Grease							
Mouting Position			Any Directions							
Protection Class			IP 65							
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Weight	*m*	kg	7.4							
		lb_m	16.31							

KVG090 2-stage

			2-stage												
Ratio	i		15	20	25	30	35	40	45	50	60	70	80	90	100
Nominal Output Torque		Nm	125	145	155	155	155	155	155	155	145	135	115	105	105
		in.lb	1106	1283	1372	1372	1372	1372	1372	1372	1283	1195	1018	929	929
Emergency Stop Torque	T_{2Not}	*Nm*	375	435	465	465	465	465	465	465	435	405	345	315	315
		in.lb	3319	3850	4116	4116	4116	4116	4116	4116	3850	3585	3053	2788	2788
Maximum Acceleration Torque	T_{2B}	*Nm*	225	261	279	279	279	279	279	279	261	243	207	189	189
		in.lb	1991	2310	2469	2469	2469	2469	2469	2469	2310	2151	1832	1673	1673
Maximum Torque	T_{2a}	*Nm*	250	290	310	310	310	310	310	310	290	270	230	210	210
		in.lb	2213	2567	2744	2744	2744	2744	2744	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*	0.46	0.46	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
		in.lb	4.07	4.07	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54
Standard Backlash P1	j_t	arcmin	≤9												
Reduced Low Backlash P0	j_t	arcmin	≤7												
Ultra Low Backlash PU	j_t	arcmin	≤5												
Torsional Rigidity	C_{t21}	*Nm/arcmin*	14												
		in.lb/arcmin	123.91												
Maximum Radial Load	F_{2AMax}	*N*	7000												
		lb_f	1574												
Maximum Axial Load	F_{2QMax}	*N*	6300												
		lb_f	1416												
Max. Tilting Moment	M_{2KMax}	*Nm*	440												
		in.lb	3894												
Mass Moment of Inertia	j_1	$kgcm^2$	0.5	0.44	0.44	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Operating Noise Level	L_{PA}	dB(A)	< 65												
Efficiency at Full loading	η	%	93												
Operating Temperature		℃	−25 to +90												
		F	−13 to +194												
Lubrication			Synthetic Lubrication Grease												
Mouting Position			Any Directions												
Protection Class			IP 65												
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)												
Weight	*m*	kg	9.8												
		lb_m	21.61												

KVG120 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	210	300	320	300	290	255	220	220
		in.lb	1859	2655	2832	2655	2567	2257	1947	1947
Emergency Stop Torque	T_{2Not}	*Nm*	630	900	960	900	870	765	660	660
		in.lb	5576	7966	8497	7966	7700	6771	5841	5841
Maximum Acceleration Torque	T_{2B}	*Nm*	378	540	576	540	522	459	396	396
		in.lb	3346	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*	1.25	1.15	1.11	1.08	1.08	1.08	1.08	1.08
		in.lb	11.06	10.18	9.82	9.56	9.56	9.56	9.56	9.56
Standard Backlash P1	j_t	arcmin	⩽7							
Reduced Low Backlash P0	j_t	arcmin	⩽5							
Ultra Low Backlash PU	j_t	arcmin	⩽3							
Torsional Rigidity	C_{t21}	*Nm/arcmin*	26							
		in.lb/arcmin	230.12							
Maximum Radial Load	F_{2AMax}	*N*	10000							
		lb_f	2248							
Maximum Axial Load	F_{2QMax}	*N*	9000							
		lb_f	2023							
Max. Tilting Moment	M_{2KMax}	*Nm*	843							
		in.lb	7461							
Mass Moment of Inertia	j_1	$kgcm^2$	3.25	2.74	2.71	2.71	2.71	2.62	2.62	2.57
Operating Noise Level	L_{PA}	dB(A)	< 68							
Efficiency at Full loading	η	%	95							
Operating Temperature		℃	−25 to +90							
		F	−13 to +194							
Lubrication			Synthetic Lubrication Grease							
Mouting Position			Any Directions							
Protection Class			IP 65							
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Weight	*m*	kg	12.1							
		lb_m	26.68							

KVG120 2-stage

			2-stage												
Ratio	i		15	20	25	30	35	40	45	50	60	70	80	90	100
Nominal Output Torque		Nm	210	300	320	320	320	320	320	320	300	290	255	220	220
		in.lb	1859	2655	2832	2832	2832	2832	2832	2832	2655	2567	2257	1947	1947
Emergency Stop Torque	T_{2Not}	*Nm*	630	900	960	960	960	960	960	960	900	870	765	660	660
		in.lb	5576	7966	8497	8497	8497	8497	8497	8497	7966	7700	6771	5841	5841
Maximum Acceleration Torque	T_{2B}	*Nm*	378	540	576	576	576	576	576	576	540	522	459	396	396
		in.lb	3346	4779	5098	5098	5098	5098	5098	5098	4779	4620	4062	3505	3505
Maximum Torque	T_{2a}	*Nm*	420	600	640	640	640	640	640	640	600	580	510	440	440
		in.lb	3717	5310	5664	5664	5664	5664	5664	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*	1.15	1.15	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
		in.lb	10.18	10.18	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56	9.56
Standard Backlash P1	j_t	arcmin	≤9												
Reduced Low Backlash P0	j_t	arcmin	≤7												
Ultra Low Backlash PU	j_t	arcmin	≤5												
Torsional Rigidity	C_{t21}	*Nm/arcmin*	26												
		in.lb/arcmin	230.12												
Maximum Radial Load	F_{2AMax}	*N*	10000												
		lb_f	2248												
Maximum Axial Load	F_{2QMax}	*N*	9000												
		lb_f	2023												
Max. Tilting Moment	M_{2KMax}	*Nm*	843												
		in.lb	7461												
Mass Moment of Inertia	j_1	$kgcm^2$	2.58	1.5	1.49	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.49	1.49	1.45
Operating Noise Level	L_{PA}	dB(A)	< 68												
Efficiency at Full loading	η	%	93												
Operating Temperature		℃	−25 to +90												
		F	−13 to +194												
Lubrication			Synthetic Lubrication Grease												
Mouting Position			Any Directions												
Protection Class			IP 65												
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)												
Weight	*m*	kg	14												
		lb_m	30.86												

KVG160 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	350	550	650	610	540	510	440	440
		in.lb	3098	4868	5753	5399	4779	4514	3894	3894
Emergency Stop Torque	T_{2Not}	*Nm*	1050	1650	1950	1830	1620	1530	1320	1320
		in.lb	9293	14604	17259	16197	14338	13542	11683	11683
Maximum Acceleration Torque	T_{2B}	*Nm*	630	990	1170	1098	972	918	792	792
		in.lb	5576	8762	10355	9718	8603	8125	7010	7010
Maximum Torque	T_{2a}	*Nm*	700	1100	1300	1220	1080	1020	880	880
		in.lb	6195	9736	11506	10798	9559	9028	7789	7789
Permitted Average Input Speed	n_{1N}	*rpm*	3000							
Maximum Input Speed	n_{1Max}	*rpm*	6000							
Mean No Load Running Torque	T_{012}	*Nm*	2.40	2.40	2.44	2.44	2.44	2.44	2.44	2.44
		in.lb	21.24	21.24	21.60	21.60	21.60	21.60	21.60	21.60
Standard Backlash P1	j_t	arcmin	⩽7							
Reduced Low Backlash P0	j_t	arcmin	⩽5							
Ultra Low Backlash PU	j_t	arcmin	⩽3							
Torsional Rigidity	C_{t21}	*Nm/arcmin*	52							
		in.lb/arcmin	460.24							
Maximum Radial Load	F_{2AMax}	*N*	19000							
		lb_f	4271							
Maximum Axial Load	F_{2QMax}	*N*	17000							
		lb_f	3822							
Max. Tilting Moment	M_{2KMax}	*Nm*	2222							
		in.lb	19666							
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		℃	−25 to +90							
		F	−13 to +194							
Lubrication			Synthetic Lubrication Grease							
Mouting Position			Any Directions							
Protection Class			IP 65							
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Weight	*m*	kg	25							
		lb_m	55.12							

KVG160 2-stage

			2-stage												
Ratio	i		15	20	25	30	35	40	45	50	60	70	80	90	100
Nominal Output Torque		Nm	350	550	650	650	650	650	650	650	610	540	510	440	440
		in.lb	3098	4868	5753	5753	5753	5753	5753	5753	5399	4779	4514	3894	3894
Emergency Stop Torque	T_{2Not}	*Nm*	1050	1650	1950	1950	1950	1950	1950	1950	1830	1620	1530	1320	1320
		in.lb	9293	14604	17259	17259	17259	17259	17259	17259	16197	14338	13542	11683	11683
Maximum Acceleration Torque	T_{2B}	*Nm*	630	990	1170	1170	1170	1170	1170	1170	1098	972	918	792	792
		in.lb	5576	8762	10355	10355	10355	10355	10355	10355	9718	8603	8125	7010	7010
Maximum Torque	T_{2a}	*Nm*	700	1100	1300	1300	1300	1300	1300	1300	1220	1080	1020	880	880
		in.lb	6195	9736	11506	11506	11506	11506	11506	11506	10798	9559	9028	7789	7789
Permitted Average Input Speed	n_{1N}	*rpm*	3000												
Maximum Input Speed	n_{1Max}	*rpm*	6000												
Mean No Load Running Torque	T_{012}	*Nm*	3	3	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
		in.lb	26.55	26.55	25.67	25.67	25.67	25.67	25.67	25.67	25.67	25.67	25.67	25.67	25.67
Standard Backlash P1	j_t	arcmin	≤9												
Reduced Low Backlash P0	j_t	arcmin	≤7												
Ultra Low Backlash PU	j_t	arcmin	≤5												
Torsional Rigidity	C_{t21}	*Nm/arcmin*	52												
		in.lb/arcmin	460.24												
Maximum Radial Load	F_{2AMax}	*N*	19000												
		lb$_f$	4271												
Maximum Axial Load	F_{2QMax}	*N*	17000												
		lb$_f$	3822												
Max. Tilting Moment	M_{2KMax}	*Nm*	2222												
		in.lb	19666												
Mass Moment of Inertia	j_1	kgcm^2	12.35	6.65	5.81	6.34	5.36	4.08	5.36	4.08	7.4	7.5	7.4	7.4	7.3
Operating Noise Level	L_{PA}	dB(A)	< 70												
Efficiency at Full loading	η	%	93												
Operating Temperature		℃	−25 to +90												
		F	−13 to +194												
Lubrication			Synthetic Lubrication Grease												
Mouting Position			Any Directions												
Protection Class			IP 65												
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)												
Weight	*m*	kg	30												
		lb$_m$	66.14												

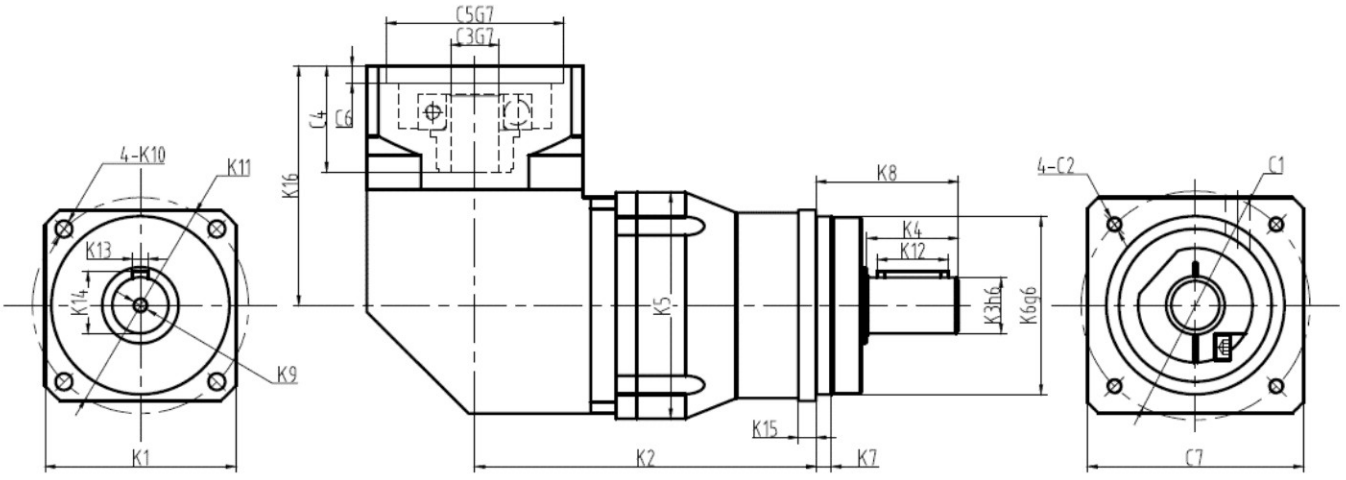
KVG205 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	1250	1200	1000	1000	1000	1000	910	910
		in.lb	11063	10621	8851	8851	8851	8851	8054	8054
Emergency Stop Torque	T_{2Not}	*Nm*	3750	3600	3000	3000	3000	3000	2730	2730
		in.lb	33190	31863	26552	26552	26552	26552	24162	24162
Maximum Acceleration Torque	T_{2B}	*Nm*	2250	2160	1800	1800	1800	1800	1638	1638
		in.lb	19914	19118	15931	15931	15931	15931	14497	14497
Maximum Torque	T_{2a}	*Nm*	2500	2400	2000	2000	2000	2000	1820	1820
		in.lb	22127	21242	17701	17701	17701	17701	16108	16108
Permitted Average Input Speed	n_{1N}	*rpm*	2500							
Maximum Input Speed	n_{1Max}	*rpm*	4000							
Mean No Load Running Torque	T_{012}	*Nm*	3.90	3.80	3.60	3.60	3.60	3.60	3.60	3.60
		in.lb	34.52	33.63	31.86	31.86	31.86	31.86	31.86	31.86
Standard Backlash P1	j_t	arcmin	⩽7							
Reduced Low Backlash P0	j_t	arcmin	⩽5							
Ultra Low Backlash PU	j_t	arcmin	⩽3							
Torsional Rigidity	C_{t21}	*Nm/arcmin*	138							
		in.lb/arcmin	1221.40							
Maximum Radial Load	F_{2AMax}	*N*	24000							
		lb_f	5395							
Maximum Axial Load	F_{2QMax}	*N*	22000							
		lb_f	4946							
Max. Tilting Moment	M_{2KMax}	*Nm*	2907							
		in.lb	25729							
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		℃	−25 to +90							
		F	−13 to +194							
Lubrication			Synthetic Lubrication Grease							
Mouting Position			Any Directions							
Protection Class			IP 65							
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Weight	*m*	kg	49							
		lb_m	108.03							

KVG205 2-stage

			2-stage												
Ratio	i		15	20	25	30	35	40	45	50	60	70	80	90	100
Nominal Output Torque		Nm	1250	1200	1000	1000	1000	1000	1000	1000	1000	1000	1000	910	910
		in.lb	11063	10621	8851	8851	8851	8851	8851	8851	8851	8851	8851	8054	8054
Emergency Stop Torque	T_{2Not}	*Nm*	3750	3600	3000	3000	3000	3000	3000	3000	3000	3000	3000	2730	2730
		in.lb	33190	31863	26552	26552	26552	26552	26552	26552	26552	26552	26552	24162	24162
Maximum Acceleration Torque	T_{2B}	*Nm*	2250	2160	1800	1800	1800	1800	1800	1800	1800	1800	1800	1638	1638
		in.lb	19914	19118	15931	15931	15931	15931	15931	15931	15931	15931	15931	14497	14497
Maximum Torque	T_{2a}	*Nm*	2500	2400	2000	2000	2000	2000	2000	2000	2000	2000	2000	1820	1820
		in.lb	22127	21242	17701	17701	17701	17701	17701	17701	17701	17701	17701	16108	16108
Permitted Average Input Speed	n_{1N}	*rpm*	2500												
Maximum Input Speed	n_{1Max}	*rpm*	4000												
Mean No Load Running Torque	T_{012}	*Nm*	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
		in.lb	25.67	25.67	24.78	24.78	24.78	24.78	24.78	24.78	24.78	24.78	24.78	24.78	24.78
Standard Backlash P1	j_t	arcmin	⩽9												
Reduced Low Backlash P0	j_t	arcmin	⩽7												
Ultra Low Backlash PU	j_t	arcmin	⩽5												
Torsional Rigidity	C_{t21}	*Nm/arcmin*	138												
		in.lb/arcmin	1221.40												
Maximum Radial Load	F_{2AMax}	*N*	24000												
		lb_f	5395												
Maximum Axial Load	F_{2QMax}	*N*	22000												
		lb_f	4946												
Max. Tilting Moment	M_{2KMax}	*Nm*	2907												
		in.lb	25729												
Mass Moment of Inertia	j_1	$kgcm^2$	12.35	7.42	7.54	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14
Operating Noise Level	L_{PA}	dB(A)	< 72												
Efficiency at Full loading	η	%	93												
Operating Temperature		℃	−25 to +90												
		F	−13 to +194												
Lubrication			Synthetic Lubrication Grease												
Mouting Position			Any Directions												
Protection Class			IP 65												
Service lifetime	L_h	h	S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)												
Weight	*m*	kg	55												
		lb_m	121.25												

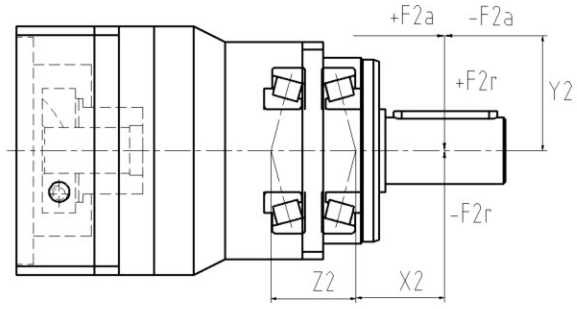
KVG Dimensions



Model	KVG070		KVG090		KVG120		KVG160		KVG205	
Stage	1	2	1	2	1	2	1	2	1	2
K1	Φ62		Φ75		Φ100		Φ140		Φ180	
K2	112	135.7	134.2	165.5	173	214.8	200.5	261.5	244.5	291.5
K3	Φ16		Φ22		Φ32		Φ40		Φ55	
K4	28		36		58		82		82	
K5	Φ70		Φ90		Φ120		Φ160		Φ205	
K6	ϕ60		Φ70		Φ90		Φ130		Φ160	
K7	5		6		8		10		12	
K8	48		56		88		112		112	
K9	M5X12		M6X16		M10X22		M12X25		M20X40	
K10	Φ5.5		Φ6.5		Φ9		Φ114.3		Φ13	
K11	Φ68		Φ85		Φ120		Φ165		Φ215	
K12	22		32		50		65		65	
K13	5		6		10		12		16	
K14	18		24.5		35		43		59	
K15	6		7		10		12		15	
C1	Φ70		Φ90		Φ145		Φ200		Φ200	
C2	M5X12		M6X15		M8X20		M12X25		M12X25	
C3	Φ14		Φ19		Φ24		Φ35		Φ35	
C4	32.1		41.6		61.3		82		82	
C5	Φ50		Φ70		Φ110		Φ114.3		Φ114.3	
C6	6.5		6.5		8		8		8	
C7	65		85		120		175		175	

The dimensions modified as per the applied motor flanges.
You can get the specific gearbox drawing solution by KDP(Kofon Design Programme) on line from our website: www.kofon-motion.com

KVG Titling moment



$$M_{2Kb} = \frac{F_{2a} \cdot y_2 + F_{2rb} \cdot (X_2 + Z_2)}{1000}$$

KVG	070	090	120	160	205	235
Z2[mm]	23.74	28.74	41.07	58.6	58.79	100.66
M_{2Kb}	227	440	843	2222	2907	5024

Technical Memo

Technical Memo