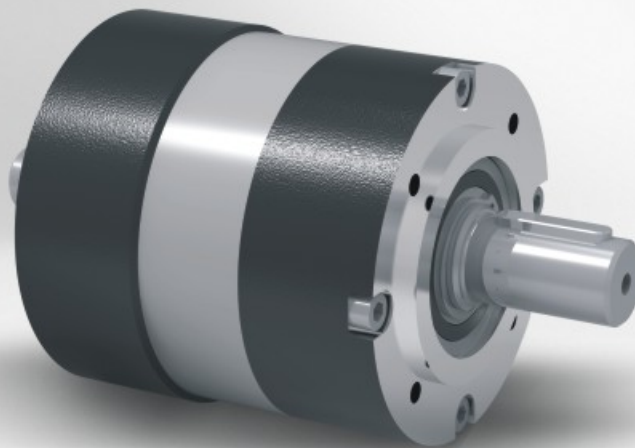


SPLS

Powerful. Precision. Reliable

▶ Servo Planetary Gearbox

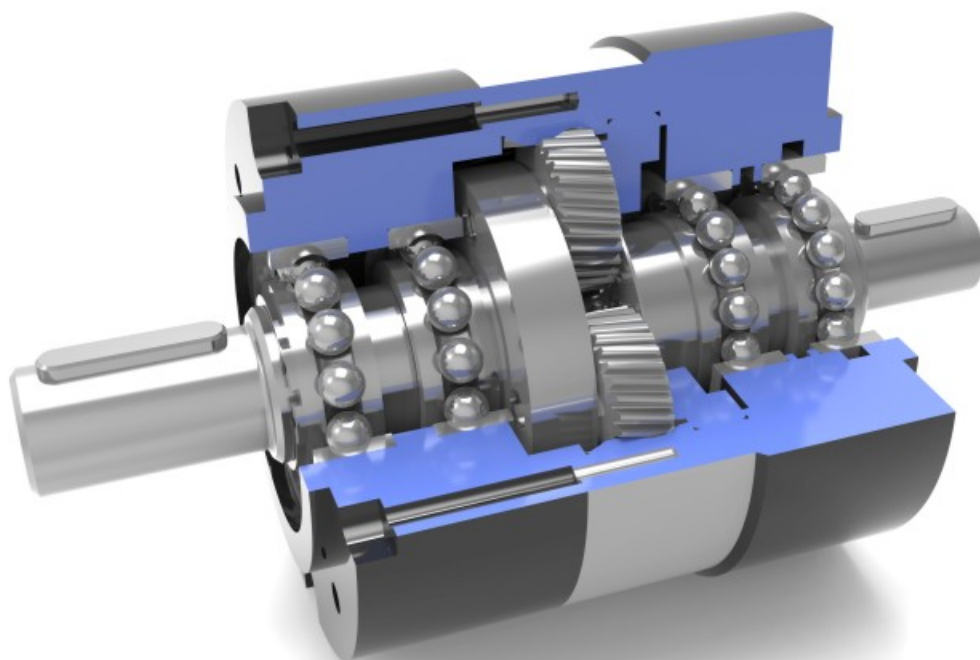
Valued Gearbox Solution





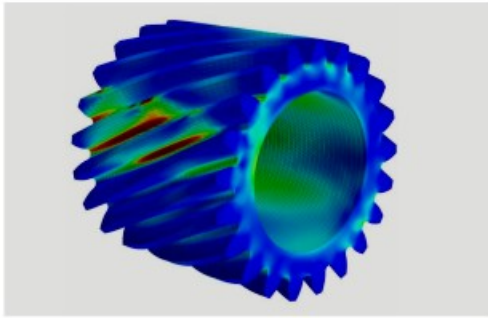
Helical Gear System Technology

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.



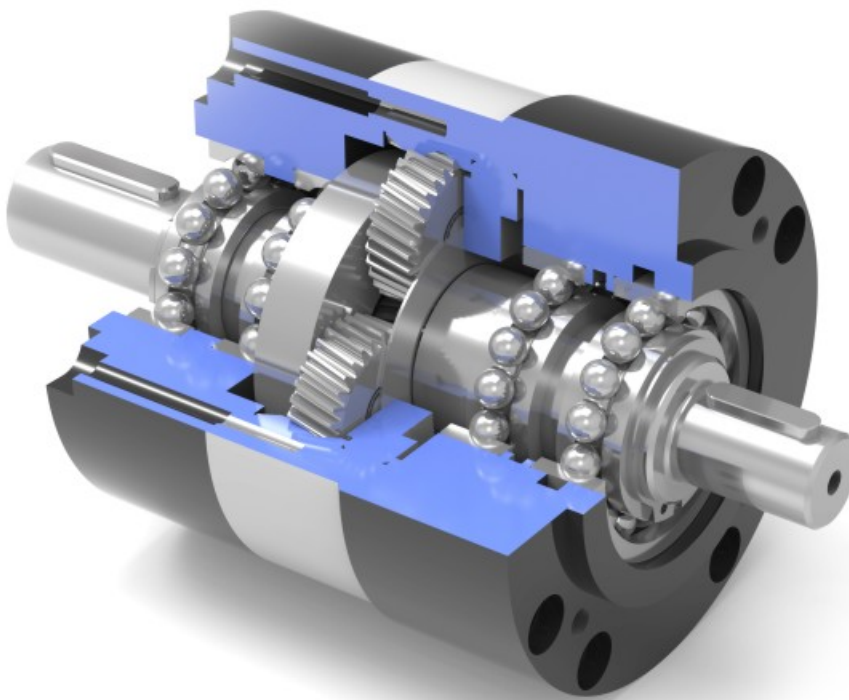
The Powerful Cantilever Planetary Carrier

The powerful cantilever planetary carrier provide great mechanical support for planetary gears, thus the complete gearbox can reach high level stability. Synthetic grease lubrication allows maintenance free for gearbox whole service life.

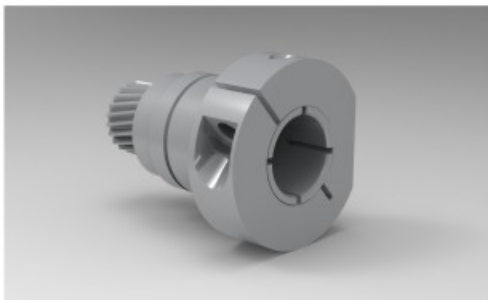


Gear Grinding and Heat Treatment Technology

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.



SPLS Series Servo Planetary Gearbox



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.

SPLS070 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	35	42	44	40	40	38	36	32
		in.lb	310	372	389	354	354	336	319	283
Emergency Stop Torque	T_{2Max}	Nm	70	84	88	80	80	76	72	64
		in.lb	620	743	779	708	708	673	637	566
Maximum Acceleration Torque	T_{2a}	Nm	63	75.6	79.2	72	72	68.4	64.8	57.6
		in.lb	558	669	701	637	637	605	574	510
Maximum Torque	T_{2a}	Nm	70	84	88	80	80	76	72	64
		in.lb	620	743	779	708	708	673	637	566
Permitted Average Input Speed	n_{1N}	rpm	4000							
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
Maximum Torsional Backlash	j_t	arcmin	≤ 8							
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_{2Max}	N	550							
		lb _f	123.64							
Maximum Axial Load	F_{20Max}	N	375							
		lb _f	84.30							
Max. Tilting Moment	M_{20Max}	Nm	80							
		in.lb	708.06							
Mass Moment of Inertia	j_i	kgcm ²	0.135	0.093	0.078	0.070	0.069	0.650	0.065	0.065
Operating Noise Level	L_{pA}	dB(A)	< 58							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	1.4							
		lb _m	3.09							

SPLS070 2-stages

			2-stages							
Ratio	i		12	15	16	20	25	32	40	64
Nominal Output Torque		Nm	37	37	44	44	44	44	44	38
		in.lb	327	327	389	389	389	389	389	336
Emergency Stop Torque	T_{2Nst}	Nm	74	74	88	88	88	88	88	76
		in.lb	655	655	779	779	779	779	779	673
Maximum Acceleration Torque	T_{2B}	Nm	66.6	66.6	79.2	79.2	79.2	79.2	79.2	68.4
		in.lb	589	589	701	701	701	701	701	605
Maximum Torque	T_{2c}	Nm	74	74	88	88	88	88	88	76
		in.lb	655	655	779	779	779	779	779	673
Permitted Average Input Speed	n_{1N}	rpm	4000							
Maximum Input Speed	n_{1Max}	rpm	6000							
Mean No Load Running Torque	T_{012}	Nm	0.2	0.17	0.2	0.17	0.17	0.15	0.15	0.15
		in.lb	1.77	1.50	1.77	1.50	1.50	1.33	1.33	1.33
Maximum Torsional Backlash	j_i	arcmin	≤ 10							
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	550							
		lb _r	123.64							
Maximum Axial Load	F_{2OMax}	N	375							
		lb _i	84.30							
Max. Tilting Moment	M_{2KMax}	Nm	80							
		in.lb	708.06							
Mass Moment of Inertia	j_1	kgcm ²	0.105	0.095	0.088	0.075	0.075	0.064	0.064	0.064
Operating Noise Level	L_{PA}	dB(A)	< 58							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	2							
		lb _m	4.41							

SPLS070 3-stages

			3-stages							
Ratio	i		80	100	125	160	200	256	320	512
Nominal Output Torque		Nm	45	45	45	45	45	45	45	38
		in.lb	398	398	398	398	398	398	398	336
Emergency Stop Torque	T_{250t}	Nm	90	90	90	90	90	90	90	76
		in.lb	797	797	797	797	797	797	797	673
Maximum Acceleration Torque	T_{2a}	Nm	81	81	81	81	81	81	81	68.4
		in.lb	717	717	717	717	717	717	717	605
Maximum Torque	T_{2a}	Nm	90	90	90	90	90	90	90	76
		in.lb	797	299	299	299	299	299	299	229
Permitted Average Input Speed	n_{1N}	rpm	4000							
Maximum Input Speed	n_{1Max}	rpm	6000							
Mean No Load Running Torque	T_{012}	Nm	0.17	0.17	0.17	0.15	0.15	0.15	0.15	0.15
		in.lb	1.50	1.50	1.50	1.33	1.33	1.33	1.33	1.33
Maximum Torsional Backlash	j_t	arcmin	≤ 12							
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	550							
		lb _f	123.64							
Maximum Axial Load	F_{2OMax}	N	375							
		lb _f	84.30							
Max. Tilting Moment	M_{2OMax}	Nm	80							
		in.lb	708.06							
Mass Moment of Inertia	J_i	kgcm ²	0.075	0.064	0.064	0.064	0.064	0.064	0.064	0.064
Operating Noise Level	L_{pA}	dB(A)	< 58							
Efficiency at Full loading	η	%	93							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	2.4							
		lb _m	5.29							

SPLS090 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	100	110	115	105	100	95	90	81
		in.lb	885	974	1018	929	885	841	797	717
Emergency Stop Torque	T_{2Nst}	Nm	200	220	230	210	200	190	180	162
		in.lb	1770	1947	2036	1859	1770	1682	1593	1434
Maximum Acceleration Torque	T_{2B}	Nm	180	198	207	189	180	171	162	145.8
		in.lb	1593	1752	1832	1673	1593	1513	1434	1290
Maximum Torque	T_{2e}	Nm	200	220	230	210	200	190	180	162
		in.lb	1770	1947	2036	1859	1770	1682	1593	1434
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
Maximum Torsional Backlash	j_1	arcmin	≤ 8							
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_{2AMax}	N	1020							
		lb _r	229.30							
Maximum Axial Load	F_{2QMax}	N	570							
		lb _i	128.14							
Max. Tilting Moment	M_{2KMax}	Nm	200							
		in.lb	1770.14							
Mass Moment of Inertia	j_1	kgcm ²	0.770	0.520	0.450	0.420	0.400	0.390	0.390	0.390
Operating Noise Level	L_{pA}	dB(A)	< 60							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	2.7							
		lb _m	5.95							

SPLS090 2-stages

			2-stages							
Ratio	i		12	15	16	20	25	32	40	64
Nominal Output Torque		Nm	100	100	110	110	110	110	110	95
		in.lb	885	885	974	974	974	974	974	841
Emergency Stop Torque	T_{2Max}	Nm	200	200	220	220	220	220	220	190
		in.lb	1770	1770	1947	1947	1947	1947	1947	1682
Maximum Acceleration Torque	T_{2a}	Nm	180	180	198	198	198	198	198	171
		in.lb	1593	1593	1752	1752	1752	1752	1752	1513
Maximum Torque	T_{2a}	Nm	200	200	220	220	220	220	220	190
		in.lb	1770	1770	1947	1947	1947	1947	1947	1682
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	0.31	0.36	0.31	0.31	0.25	0.25	0.25
		in.lb	3.19	2.74	3.19	2.74	2.74	2.21	2.21	2.21
Maximum Torsional Backlash	j_t	arcmin	≤ 10							
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	1020							
		lb _f	229.30							
Maximum Axial Load	F_{20Max}	N	570							
		lb _f	128.14							
Max. Tilting Moment	M_{20Max}	Nm	200							
		in.lb	1770.14							
Mass Moment of Inertia	j_i	kgcm ²	0.670	0.510	0.500	0.440	0.440	0.390	0.390	0.390
Operating Noise Level	L_{pA}	dB(A)	< 60							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	3.8							
		lb _m	8.38							

SPLS090 3-stages

			3-stages							
Ratio	i		80	100	125	160	200	256	320	512
Nominal Output Torque		Nm	120	120	120	120	120	120	120	95
		in.lb	1062	1062	1062	1062	1062	1062	1062	841
Emergency Stop Torque	T_{2Nst}	Nm	240	240	240	240	240	240	240	190
		in.lb	2124	2124	2124	2124	2124	2124	2124	1682
Maximum Acceleration Torque	T_{2B}	Nm	216	216	216	216	216	216	216	171
		in.lb	1912	1912	1912	1912	1912	1912	1912	1513
Maximum Torque	T_{2s}	Nm	240	240	240	240	240	240	240	190
		in.lb	2124	2124	2124	2124	2124	2124	2124	1682
Permitted Average Input Speed	n_{1N}	rpm	3000							
Maximum Input Speed	n_{1Max}	rpm	6000							
Mean No Load Running Torque	T_{012}	Nm	0.31	0.31	0.31	0.25	0.25	0.25	0.25	0.25
		in.lb	2.74	2.74	2.74	2.21	2.21	2.21	2.21	2.21
Maximum Torsional Backlash	j_1	arcmin	≤ 12							
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_{2AMax}	N	1020							
		lb _r	229.30							
Maximum Axial Load	F_{2QMax}	N	570							
		lb _i	128.14							
Max. Tilting Moment	M_{2KMax}	Nm	200							
		in.lb	1770.14							
Mass Moment of Inertia	j_1	kgcm ²	0.500	0.440	0.700	0.390	0.390	0.390	0.390	0.390
Operating Noise Level	L_{PA}	dB(A)	< 60							
Efficiency at Full loading	η	%	93							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	5							
		lb _m	11.02							

SPLS120 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	190	240	245	240	235	210	200	196
		in.lb	1682	2124	2168	2124	2080	1859	1770	1735
Emergency Stop Torque	T_{2Max}	Nm	380	480	490	480	470	420	400	392
		in.lb	3363	4248	4337	4248	4160	3717	3540	3469
Maximum Acceleration Torque	T_{2a}	Nm	342	432	441	432	423	378	360	352.8
		in.lb	3027	3824	3903	3824	3744	3346	3186	3123
Maximum Torque	T_{2a}	Nm	380	480	490	480	470	420	400	392
		in.lb	3363	4248	4337	4248	4160	3717	3540	3469
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
Maximum Torsional Backlash	j_t	arcmin	≤ 8							
Torsional Rigidity	C_{121}	Nm/arcmin	10	10	10	10	10	10	10	10
		in.lb/arcmin	88.51	88.51	88.51	88.51	88.51	88.51	88.51	88.51
Maximum Radial Load	F_{2Max}	N	2070							
		lb _f	465.34							
Maximum Axial Load	F_{20Max}	N	970							
		lb _f	218.06							
Max. Tilting Moment	M_{20Max}	Nm	400							
		in.lb	3540.28							
Mass Moment of Inertia	j_i	kgcm ²	2.630	1.790	1.530	1.500	1.400	1.320	1.320	1.320
Operating Noise Level	L_{pA}	dB(A)	< 62							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	6.5							
		lb _m	14.33							

SPLS120 2-stages

			2-stages							
Ratio	i		12	15	16	20	25	32	40	64
Nominal Output Torque		Nm	210	210	230	230	255	255	250	210
		in.lb	1859	1859	2036	2036	2257	2257	2213	1859
Emergency Stop Torque	T_{2Nst}	Nm	420	420	460	460	510	510	500	420
		in.lb	3717	3717	4071	4071	4514	4514	4425	3717
Maximum Acceleration Torque	T_{2B}	Nm	378	378	414	414	459	459	450	378
		in.lb	3346	3346	3664	3664	4062	4062	3983	3346
Maximum Torque	T_{2e}	Nm	420	420	460	460	510	510	500	420
		in.lb	3717	3717	4071	4071	4514	4514	4425	3717
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	0.78	0.78	0.78
		in.lb	8.41	7.52	8.41	7.52	7.52	6.90	6.90	6.90
Maximum Torsional Backlash	j_1	arcmin	≤ 10							
Torsional Rigidity	C_{121}	Nm/arcmin	10	10	10	10	10	10	10	10
		in.lb/arcmin	88.51	88.51	88.51	88.51	88.51	88.51	88.51	88.51
Maximum Radial Load	F_{2AMax}	N	2070							
		lb _r	465.34							
Maximum Axial Load	F_{2QMax}	N	970							
		lb _i	218.06							
Max. Tilting Moment	M_{2KMax}	Nm	400							
		in.lb	3540.28							
Mass Moment of Inertia	j_1	kgcm ²	1.630	1.670	1.750	1.530	1.490	1.320	1.320	1.320
Operating Noise Level	L_{PA}	dB(A)	< 62							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	9.5							
		lb _m	20.94							

SPLS120 3-stages

			3-stages							
Ratio	i		80	100	125	160	200	256	320	512
Nominal Output Torque		Nm	255	255	255	255	255	255	255	210
		in.lb	2257	2257	2257	2257	2257	2257	2257	1859
Emergency Stop Torque	T_{2Max}	Nm	510	510	510	510	510	510	510	420
		in.lb	4514	4514	4514	4514	4514	4514	4514	3717
Maximum Acceleration Torque	T_{2a}	Nm	459	459	459	459	459	459	459	378
		in.lb	4062	4062	4062	4062	4062	4062	4062	3346
Maximum Torque	T_{2a}	Nm	510	510	510	510	510	510	510	420
		in.lb	4514	4514	4514	4514	4514	4514	4514	3717
Permitted Average Input Speed	n_{1N}	rpm	3000							
Maximum Input Speed	n_{1Max}	rpm	6000							
Mean No Load Running Torque	T_{012}	Nm	0.85	0.85	0.85	0.78	0.78	0.78	0.78	0.78
		in.lb	7.52	7.52	7.52	6.90	6.90	6.90	6.90	6.90
Maximum Torsional Backlash	j_t	arcmin	≤ 12							
Torsional Rigidity	C_{121}	Nm/arcmin	10	10	10	10	10	10	10	10
		in.lb/arcmin	88.51	88.51	88.51	88.51	88.51	88.51	88.51	88.51
Maximum Radial Load	F_{2Max}	N	2070							
		lb _f	465.34							
Maximum Axial Load	F_{20Max}	N	970							
		lb _f	218.06							
Max. Tilting Moment	M_{20Max}	Nm	400							
		in.lb	3540.28							
Mass Moment of Inertia	j_i	kgcm ²	1.530	1.490	2.570	1.300	1.300	1.300	1.300	1.300
Operating Noise Level	L_{pA}	dB(A)	< 62							
Efficiency at Full loading	η	%	93							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	11							
		lb _m	24.25							

SPLS160 1-stage

			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	440	544	585	500	480	450	415	400
		in.lb	3894	4815	5178	4425	4248	3983	3673	3540
Emergency Stop Torque	T_{2Nst}	Nm	880	1088	1170	1000	960	900	830	800
		in.lb	7789	9630	10355	8851	8497	7966	7346	7081
Maximum Acceleration Torque	T_{2B}	Nm	792	979.2	1053	900	864	810	747	720
		in.lb	7010	8667	9320	7966	7647	7169	6611	6373
Maximum Torque	T_{2c}	Nm	880	1088	1170	1000	960	900	830	800
		in.lb	7789	9630	10355	8851	8497	7966	7346	7081
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
Maximum Torsional Backlash	j_1	arcmin	≤ 8							
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	254.02	254.02	254.02	254.02	254.02	254.02	254.02	254.02
Maximum Radial Load	F_{2AMax}	N	7300							
		lb _r	1641.04							
Maximum Axial Load	F_{2OMax}	N	6400							
		lb _i	1438.72							
Max. Tilting Moment	M_{2KMax}	Nm	850							
		in.lb	7523.10							
Mass Moment of Inertia	j_1	kgcm ²	12.100	7.750	6.000	5.520	5.100	3.740	3.620	3.620
Operating Noise Level	L_{PA}	dB(A)	< 68							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	15.5							
		lb _m	34.17							

SPLS160 2-stages

			2-stages							
Ratio	i		12	15	16	20	25	32	40	64
Nominal Output Torque		Nm	450	450	450	564	608	608	608	450
		in.lb	3983	3983	3983	4992	5381	5381	5381	3983
Emergency Stop Torque	T_{2Max}	Nm	900	900	900	1128	1216	1216	1216	900
		in.lb	7966	7966	7966	9984	10762	10762	10762	7966
Maximum Acceleration Torque	T_{2a}	Nm	810	810	810	1015.2	1094.4	1094.4	1094.4	810
		in.lb	7169	7169	7169	8985	9686	9686	9686	7169
Maximum Torque	T_{2a}	Nm	900	900	900	1128	1216	1216	1216	900
		in.lb	7966	7966	7966	9984	10762	10762	10762	7966
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
		in.lb	21.68	20.36	21.68	20.36	20.36	19.47	19.47	19.47
Maximum Torsional Backlash	j_t	arcmin	≤ 10							
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	254.02	254.02	254.02	254.02	254.02	254.02	254.02	254.02
Maximum Radial Load	F_{2Max}	N	7300							
		lb _f	1641.04							
Maximum Axial Load	F_{20Max}	N	6400							
		lb _f	1438.72							
Max. Tilting Moment	M_{20Max}	Nm	850							
		in.lb	7523.10							
Mass Moment of Inertia	J_1	kgcm ²	10.100	8.100	7.470	6.650	5.810	6.340	5.360	4.080
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	28							
		lb _m	61.73							

SPLS160 3-stages

			3-stages							
Ratio	i		80	100	125	160	200	256	320	512
Nominal Output Torque		Nm	580	580	580	580	608	608	580	450
		in.lb	5133	5133	5133	5133	5381	5381	5133	3983
Emergency Stop Torque	T_{2Nst}	Nm	1160	1160	1160	1160	1216	1216	1160	900
		in.lb	10267	10267	10267	10267	10762	10762	10267	7966
Maximum Acceleration Torque	T_{2B}	Nm	1044	1044	1044	1044	1094.4	1094.4	1044	810
		in.lb	9240	9240	9240	9240	9686	9686	9240	7169
Maximum Torque	T_{2c}	Nm	1160	1160	1160	1160	1216	1216	1160	900
		in.lb	10267	10267	10267	10267	10762	10762	10267	7966
Permitted Average Input Speed	n_{1N}	rpm	3000							
Maximum Input Speed	n_{1Max}	rpm	6000							
Mean No Load Running Torque	T_{012}	Nm	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2
		in.lb	20.36	20.36	20.36	19.47	19.47	19.47	19.47	19.47
Maximum Torsional Backlash	j_1	arcmin	≤ 12							
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	88.51	88.51	88.51	88.51	88.51	88.51	88.51	88.51
Maximum Radial Load	F_{2AMax}	N	7300							
		lb _r	1641.04							
Maximum Axial Load	F_{2OMax}	N	6400							
		lb _i	1438.72							
Max. Tilting Moment	M_{2KMax}	Nm	850							
		in.lb	7523.10							
Mass Moment of Inertia	j_1	kgcm ²	7.400	7.300	7.300	6.500	6.500	6.500	6.500	6.500
Operating Noise Level	L_{PA}	dB(A)	< 68							
Efficiency at Full loading	η	%	93							
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	30.5							
		lb _m	67.24							

SPLS205 1-stage

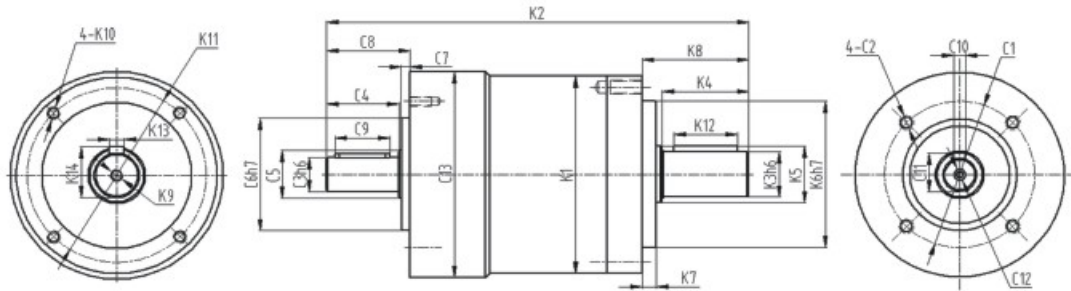
			1-stage							
Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque		Nm	600	1050	1000	800	800	800	710	710
		in.lb	5310	9293	8851	7081	7081	7081	6284	6284
Emergency Stop Torque	T_{2Max}	Nm	1200	2100	2000	1600	1600	1600	1420	1420
		in.lb	10621	18586	17701	14161	14161	14161	12568	12568
Maximum Acceleration Torque	T_{2a}	Nm	1080	1890	1800	1440	1440	1440	1278	1278
		in.lb	9559	16728	15931	12745	12745	12745	11311	11311
Maximum Torque	T_{2a}	Nm	1200	2100	2000	1600	1600	1600	1420	1420
		in.lb	10621	18586	17701	14161	14161	14161	12568	12568
Permitted Average Input Speed	n_{1N}	rpm	2000							
Maximum Input Speed	n_{1Max}	rpm	4000							
Mean No Load Running Torque	T_{012}	Nm	3.5	3.3	3.15	3	3	3	3	3
		in.lb	30.98	29.21	27.88	26.55	26.55	26.55	26.55	26.55
Maximum Torsional Backlash	j_t	arcmin	≤ 8							
Torsional Rigidity	C_{121}	Nm/arcmin	120	120	120	120	120	120	120	120
		in.lb/arcmin	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08
Maximum Radial Load	F_{2Max}	N	12000							
		lb _f	2697.60							
Maximum Axial Load	F_{20Max}	N	6800							
		lb _f	1528.64							
Max. Tilting Moment	M_{20Max}	Nm	1280							
		in.lb	11328.90							
Mass Moment of Inertia	J_i	kgcm ²	28.980	23.670	22.750	22.480	22.480	22.590	22.590	22.550
Operating Noise Level	L_{pA}	dB(A)	< 70							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	31							
		lb _m	68.34							

SPLS205 2-stages

			2-stages							
Ratio	i		12	15	16	20	25	32	40	64
Nominal Output Torque		Nm	650	650	1050	1000	1000	1050	1000	800
		in.lb	5753	5753	9293	8851	8851	9293	8851	7081
Emergency Stop Torque	T_{2Nst}	Nm	1300	1300	2100	2000	2000	2100	2000	1600
		in.lb	11506	11506	18586	17701	17701	18586	17701	14161
Maximum Acceleration Torque	T_{2B}	Nm	810	810	810	1015.2	1094.4	1094.4	1094.4	810
		in.lb	7169	7169	7169	8985	9686	9686	9686	7169
Maximum Torque	T_{2w}	Nm	900	900	900	1128	1216	1216	1216	900
		in.lb	7966	7966	7966	9984	10762	10762	10762	7966
Permitted Average Input Speed	n_{1N}	rpm	2000							
Maximum Input Speed	n_{1Max}	rpm	4000							
Mean No Load Running Torque	T_{012}	Nm	2.45	2.3	2.45	2.3	2.3	2.2	2.2	2.2
		in.lb	21.68	20.36	21.68	20.36	20.36	19.47	19.47	19.47
Maximum Torsional Backlash	j_1	arcmin	≤ 10							
Torsional Rigidity	C_{121}	Nm/arcmin	120	120	120	120	120	120	120	120
		in.lb/arcmin	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08
Maximum Radial Load	F_{2AMax}	N	12000							
		lb _r	2697.60							
Maximum Axial Load	F_{2OMax}	N	6800							
		lb _i	1528.64							
Max. Tilting Moment	M_{2OMax}	Nm	1280							
		in.lb	11328.90							
Mass Moment of Inertia	j_1	kgcm ²	18.980	16.980	7.540	7.420	7.540	7.140	7.140	7.540
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_{h1}	h	20,000(Continuous Operation)							
Weight	m	kg	39							
		lb _m	85.98							

SPLS205 3-stages

			3-stages							
Ratio	i		80	100	125	160	200	256	320	512
Nominal Output Torque		Nm	1000	1000	1000	1000	1000	1000	1000	800
		in.lb	8851	8851	8851	8851	8851	8851	8851	7081
Emergency Stop Torque	T_{2Max}	Nm	2000	2000	2000	2000	2000	2000	2000	1600
		in.lb	17701	17701	17701	17701	17701	17701	17701	14161
Maximum Acceleration Torque	T_{2a}	Nm	1800	1800	1800	1800	1800	1800	1800	1440
		in.lb	15931	15931	15931	15931	15931	15931	15931	12745
Maximum Torque	T_{2a}	Nm	2000	2000	2000	2000	2000	2000	2000	1600
		in.lb	17701	17701	17701	17701	17701	17701	17701	14161
Permitted Average Input Speed	n_{1N}	rpm	2000							
Maximum Input Speed	n_{1Max}	rpm	4000							
Mean No Load Running Torque	T_{012}	Nm	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2
		in.lb	20.36	20.36	20.36	19.47	19.47	19.47	19.47	19.47
Maximum Torsional Backlash	j_t	arcmin	≤ 12							
Torsional Rigidity	C_{121}	Nm/arcmin	120	120	120	120	120	120	120	120
		in.lb/arcmin	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08	1062.08
Maximum Radial Load	F_{2Max}	N	12000							
		lb _f	2697.60							
Maximum Axial Load	F_{20Max}	N	6800							
		lb _f	1528.64							
Max. Tilting Moment	M_{20Max}	Nm	1280							
		in.lb	11328.90							
Mass Moment of Inertia	j_i	kgcm ²	7.540	7.420	7.420	7.140	7.140	7.140	7.140	7.140
Operating Noise Level	L_{pA}	dB(A)	< 70							
Efficiency at Full loading	η	%	93							
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_h	h	20,000(Continuous Operation)							
Weight	m	kg	48							
		lb _m	105.82							



Model	SPLS070			SPLS090			SPLS120			SPLS160			SPLS205		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	Φ70			Φ89			Φ115.5			Φ160			Φ205		
	Φ2.76			Φ3.5			Φ4.55			Φ6.30			Φ8.07		
K2	145.5	169.2	192.9	163.7	195	226.3	213	248	283	294	355	375	355	366.5	427.5
	5.73	6.67	7.60	6.45	7.68	8.92	8.39	9.77	11.15	11.58	13.99	14.78	13.99	14.44	16.84
K3	Φ14			Φ20			Φ25			Φ40			Φ55		
	Φ0.55			Φ0.79			Φ0.98			Φ1.58			Φ2.17		
K4	30			36			50			80			82		
	1.18			1.42			1.97			3.15			3.23		
K5	Φ17			Φ25			Φ35			Φ50			Φ60		
	Φ0.67			Φ0.99			Φ1.38			Φ1.97			Φ2.36		
K6	Φ40			Φ60			Φ80			Φ130			Φ160		
	Φ1.57			Φ2.36			Φ3.15			Φ5.12			Φ6.30		
K7	3			3			4			5			20		
	0.12			0.12			0.16			0.2			0.79		
K8	35			40			55			87			105		
	1.38			1.58			2.17			3.43			4.14		
K9	M5X12			M6X16			M10X26			M12X25			M20X40		
K10	M5X12			M6X15			M10X20			M12X25			M12X22		
K11	Φ52			Φ70			Φ100			Φ145			Φ184		
	Φ2.05			Φ2.76			Φ3.94			Φ5.71			Φ7.24		
K12	22			28			40			70			70		
	0.87			1.10			1.58			2.76			2.76		
K13	5			6			8			12			16		
	0.20			0.24			0.32			0.47			0.63		
K14	16.00			22.5			28			43			59		
	0.63			0.89			1.10			1.69			2.32		
C1	Φ52			Φ70			Φ100			Φ145		Φ100	Φ135	Φ145	
	Φ2.05			Φ2.76			Φ3.94			Φ5.71		Φ3.94	Φ5.32	Φ5.71	
C2	M5X11			M6X12			M10X20			M12X20		M8X22	M8X14	M12X20	
C3	Φ12			Φ16			Φ20			Φ35		Φ22	Φ40	Φ35	
	Φ0.47			Φ0.63			Φ0.79			Φ1.38		Φ0.88	Φ1.58	Φ1.38	
C4	25			26			40			57		40	70	57	
	0.99			1.02			1.58			2.25		1.58	2.76	2.25	
C5	Φ17			25			Φ35			Φ50		Φ35	Φ50	Φ50	
	Φ0.67			0.99			Φ1.38			Φ1.97		Φ1.38	Φ1.97	Φ1.97	
C6	Φ40			Φ60			Φ80			Φ130		Φ80	Φ120	Φ130	
	Φ1.58			2.36			Φ3.15			Φ5.12		Φ3.15	Φ4.73	Φ5.12	
C7	3			3			4			5		4	8	5	
	0.12			0.12			0.16			0.20		0.16	0.32	0.20	
C8	29			30			45			65		45	80	65	
	1.14			1.18			1.77			2.56		1.77	3.15	2.56	
C9	18			20			30			45		30	60	45	
	0.71			0.79			1.18			1.77		1.18	2.36	1.77	
C10	4			5			6			10		6	12	10	
	0.16			0.20			0.24			0.39		0.24	0.47	0.39	
C11	13.5			18			22.5			38		24.5	43	38	
	0.53			0.71			0.89			1.50		0.97	1.69	1.50	
C12	M4X8			M5X10			M6X16			M12X25		M6X16	M12X25	M12X25	
C13	Φ73			Φ92			Φ120			Φ162		Φ123	Φ150	Φ162	
	Φ2.88			Φ3.63			Φ4.73			Φ6.38		Φ4.85	Φ5.91	Φ6.38	

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

Technical Memo

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin, dark gray lines. The lines are spaced evenly across the entire page, creating a continuous pattern of squares suitable for drawing or technical work. There are no margins, text, or other markings on the paper.