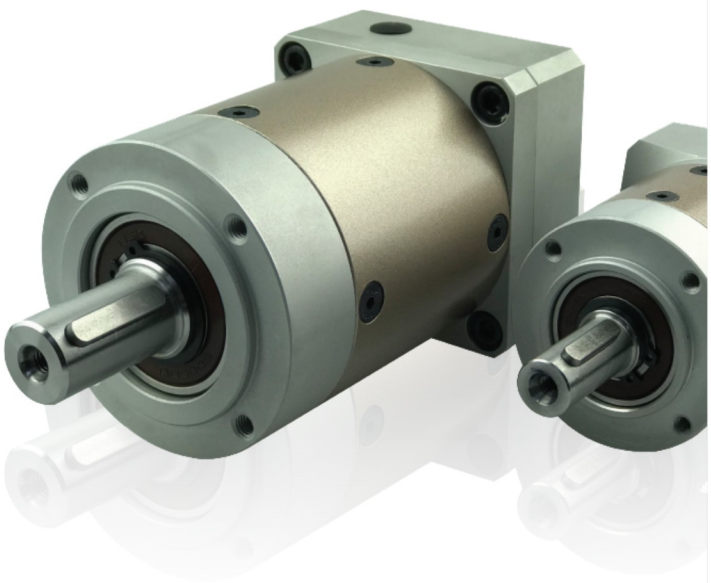
2nd Generation

SPL

SERIES SERVO PLANETARY GEARBOX

SPL is our highly successful precision gearbox series. All SPL gears adopt the alloy forged steel as the raw material, the powerful heat treatment, the latest helical gear design, full needle roller bearings, and the high level gear grinding craft. For any regular industrial applications, SPL would be your great option for gearbox.



Gearbox Options

- Output shaft key way, without key be available.
- Synthetic Lubrication Grease, low temperature grease available.
- Adaptor flange solution available.

Gearbox Features

- Precision gearing and cost-effective.
- High efficiency and low noise control.
- Long constant operation service lifetime.
- Optimized inertia moment.
- Limited temperature rise.
- Flexible input mounting dimensions.
- Maintenance free for whole service lifetime.

SPL 2nd Generation Technical Data

Model		SPL040	SPL060	SPL080	SPL120	SPL160	Ratio	Stage
Nominal Output Torque	Nm	13	28	75	190	440	3	1
		17	36	90	240	544	4	
		17	37	95	245	585	5	
		--	37	85*	240*	500*	6	
		--	37	82	235*	480	7	
		12	32	80	210	450	8	
		--	30	78	200	415	9	
		--	25	65	196	400	10	
		16	30	80	210	450	12	2
		16	31	90	210	450	15	
		16	42	90	220	450	16	
		17	42	90	230	564	20	
		17	42	90	255	608	25	
		17	42	90	255	608/35	32	
		17	42	90	250	608	40	
		13	33	80	210	450/63	64	
		17	42	95	255	580	80	3
		17	42	95	255	580	100	
		17	42	95	255	580	125	
		17	42	95	255	580	160	
		17	42	95	255	608	200	
		17	42	95	255	608/224	256	
		17	42	95	255	580/280	320	
		13	33	82	210	450/504	512	
Emergency Stop Torque	Nm	Double Rated Output Torque						
Max Radial Force[1]	N	385	430	640	2070	7300		
Max Axial Force[1]	N	250	320	420	970	6400		
Operating Temperature	℃	-25~90						
Mouting Position		Any Directions						
Lubrication		Synthetic Lubrication Grease						
Protection Class		IP65						
Efficiency at full load	%	97						1
		95						2
		93						3
Service Lifetime	h	20,000 (Continuous Operation)						
Unit Weight	kg	0.4	0.7	2	6	20		1
		0.5	1	3.2	8	25		2
		0.6	1.2	4	10	30		3

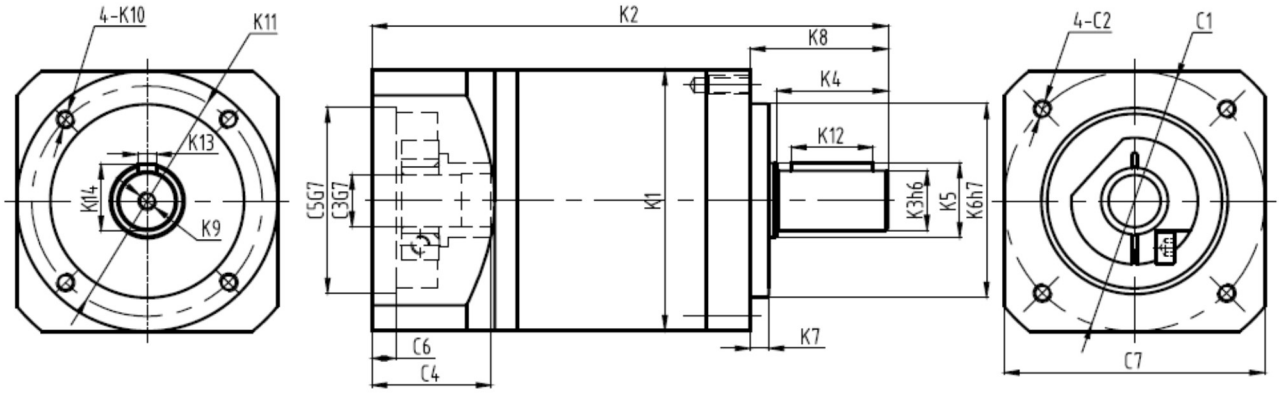
1. Values based on the output shaft speed n2=100 RPM

SPL 2nd Generation Technical Data

Model		SPL040	SPL060	SPL080	SPL120	SPL160	Ratio	Stage
Mass Moment of Inertia	$kgcm^2$	0.031	0.135	0.77	2.63	12.1	3	1
		0.22	0.093	0.52	1.79	7.75	4	
		0.019	0.078	0.45	1.53	6	5	
		--	0.07	0.42	1.5	5.52	6	
		--	0.069	0.4	1.4	5.1	7	
		0.017	0.065	0.39	1.32	3.74	8	
		--	0.065	0.39	1.32	3.62	9	
		--	0.065	0.39	1.32	3.62	10	
		0.031	0.105	0.67	1.63	10.1	12	2
		0.029	0.095	0.51	1.67	8.1	15	
		0.023	0.088	0.5	1.75	7.47	16	
		0.022	0.075	0.44	1.53	6.65	20	
		0.019	0.075	0.44	1.49	5.81	25	
		0.019	0.064	0.39	1.32	6.34	32	
		0.017	0.064	0.39	1.32	5.36	40	
		0.016	0.064	0.39	1.32	4.08	64	
		0.029	0.075	0.5	1.53	7.4	80	3
		0.019	0.064	0.44	1.49	7.3	100	
		0.019	0.064	0.7	2.57	7.3	125	
		0.029	0.064	0.39	1.3	6.5	160	
		0.016	0.064	0.39	1.3	6.5	200	
		0.016	0.064	0.39	1.3	6.5	256	
		0.016	0.064	0.39	1.3	6.5	320	
		0.016	0.064	0.39	1.3	6.5	512	
Backlash	arcmin	<15	<10	<10	<10	<10	P2	1
		<17	<12	<12	<12	<12	P2	2
		<20	<15	<15	<15	<15	P2	3
Torsional Rigidity	Nm/arcmin	0.7	2.5	4	10	28.7		
Running Noise[1]	dB(A)	<55	<58	<60	<62	<68		
Max Input Speed	min^{-1}	8000	6000	6000	6000	6000		
Rated Input Speed[2]	min^{-1}	4000	4000	3000	3000	3000		

1. Measured on input running speed at n1=3000 RPM without loading, 1m distance.

SPL 2nd Generation Dimensions



Model	SPL040			SPL060			SPL080			SPL120			SPL160		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	Φ40			Φ60			Φ80			Φ120			Φ160		
K2	88.8	101.8	113.8	116.4	132	147.5	147	169	191	198.5	233.5	268.5	275.5	336.5	356
K3	Φ10			Φ14			Φ20			Φ25			Φ40		
K4	23			30			36			50			80		
K5	Φ12			Φ17			Φ25			Φ35			Φ50		
K6	Φ26			Φ40			Φ60			Φ80			Φ130		
K7	2			3			3			4			5		
K8	26			35			40			55			87		
K9	M3X9			M5X12			M6X15			M10X26			M12X25		
K10	M4X6			M5X8			M6X12			M10X20			M12X20		
K11	Φ34			Φ52			Φ70			Φ100			Φ145		
K12	16			22			28			40			70		
K13	3			5			6			8			12		
K14	11.2			16			22.5			28			43		
C1	Φ46			Φ70			Φ90			Φ145			Φ200		Φ145
C2	M4X10			M5X12			M6X15			M8X20			M12X25		M8X20
C3	Φ8			Φ14			Φ19			Φ24			Φ35		Φ24
C4	26.1			32.1			41.6			56.3			82		61.3
C5	Φ30			Φ50			Φ70			Φ110			Φ114.3		Φ110
C6	6			6.5			6.5			8			8		6.5
C7	45			70			89			120			175		120

Order Instructions

Order Code: SPL – 120 – 2 – 15 – S1 – P2 – Servo Motor

SPL

Gearbox Series: SPL

120

Gearbox Size

2

Gearbox Stage

15

Gearbox Ratio

S1

S1: Output shaft with key
S2: Output shaft without key

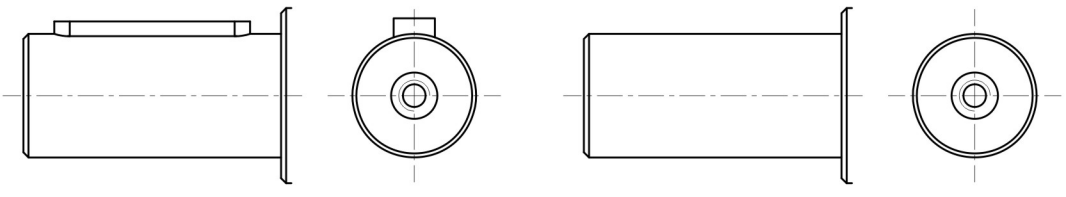
P2

Gearbox Precision

Servo Motor

Motor Manufacturer and model

Output Shaft Key Option



S1: Output shaft with key

S2: Output shaft without key

Ordering Example: SPL120-2-15-S1-P2-ABB-8M1230

If there is any question, please ask our engineering sales for solutions.

Solution Memo



KOFON
www.kofon-motion.com