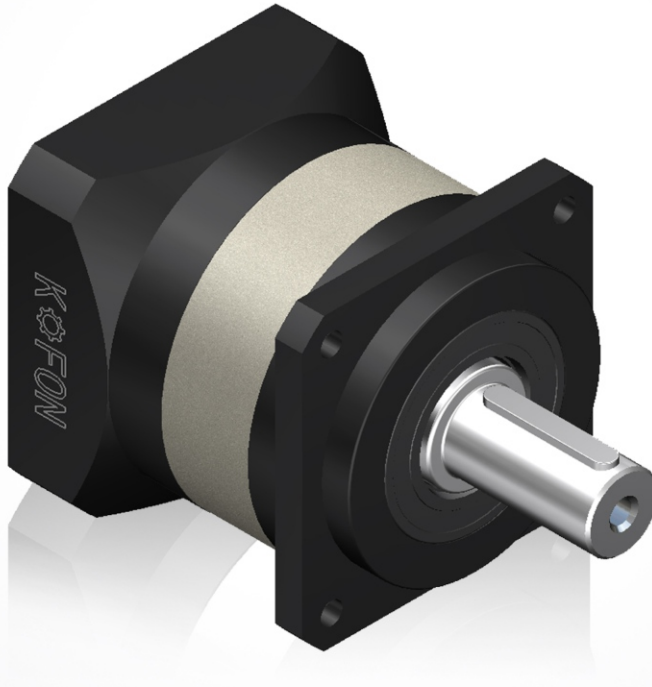


KPLF



KPLF Series Servo Planetary Gearbox Product Highlight

- High precision: backlash <math>< 3</math> arc-min.
- Processing by ultra precision machine and advanced gear grinding craft, the gear precision can be controlled under ISO4 to ensure the gearboxes high precision and efficiency.
- Choosing low-carbon alloy forged steel as the raw material of the gear, the hardness can reach HRC60 by deepen harden of carburizing heat treatment to ensure gear strength and lifetime.
- With integrated design of caged planet carrier and output shaft to realize high rigidity and high precision.
- Planet-gear bearings use full needle roller bearing cage to increase gearboxes output torque and rigidity.
- Can be connected with any servo motor around the world.
- No grease leakage and miantenance free by using synthetic lubricating grease and IP65 protection design.

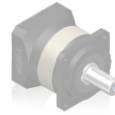
KPLF Series Servo Planetary Gearbox Technical Data

Model		KPLF050	KPLF070	KPLF090	KPLF120	KPLF160	KPLF205	KPLF235	Ratio	Stage
Rated Output Torque	Nm	20	56	125	210	350	650	1200	3	1
		21	52	145	300	550	1250	1800	4	
		21	55	155	320	650	1200	2050	5	
		20*	50*	145*	300*	610*	1000*	1850*	6	
		19	50*	135	290*	540	1000	1750*	7	
		18*	45	115	255	510*	1000*	1550	8	
		14	42	105*	220*	440	910	1500*	9	
		14	42	105	220	440	910	1500	10	
		20	56	125	310	500	650	1200	12	
		21	52	145	300	550	1250	1800	16	
		21	55	145	300	650	1200	2050	20	
		21	55	155	320	650	1200	2050	25	
		--	52	145	305	550*	1250*	1800*	32	
		21	55*	155	320*	650	1200	2050	35	
		--	55	155	320	550*	1200*	2050*	40	
		21	55*	155	320*	650	1200	2050	45	
		21	55	155	320	650	1200	2050	50	
		18/63	45	115	255	510/63	1000/63	1550	64	3
		21	52	155	320	650	1200	2050	80	
		21	52	155	320	650	1200	2050	100	
		21	52	155	320	650	1200	2050	125	
		21/140	52	155	320	650	1200/140	2050/140	160	
		21/180	52	155	320	650	1200/180	2050/180	200	
		21/252	52	155	320	650/224	1200/252	2050/252	256	
21/315	52	155	320	650/280	1200/315	2050/315	320			
18/441	45	115	255	510/504	1000/441	1550/504	512			
Emergency Stop Torque	Nm	Triple rated output torque								
Max Radial Force	N	770	1500	3200	6700	9600	14000	16000		
Max Axial Force	N	380	760	1600	3300	4800	7000	8000		
Full Loading Efficiency	%	97								1
		95								2
		93								3
Average lifetime	h	20000								
Weight	kg	0.6	1.4	3.3	5.5	20	31	53		1
		0.9	1.6	4.5	8	25	39	66		2
		1.1	1.8	5.5	10	30	48	75		3

The subscript "1" in the output speed of 100RPM, in the center of the output shaft position (L/2) permissible radial force and axial force.

Note: with "*" is not commonly used speed ratio, in the table there are 2 groups of digital representation of the torque corresponding to the actual speed ratio.

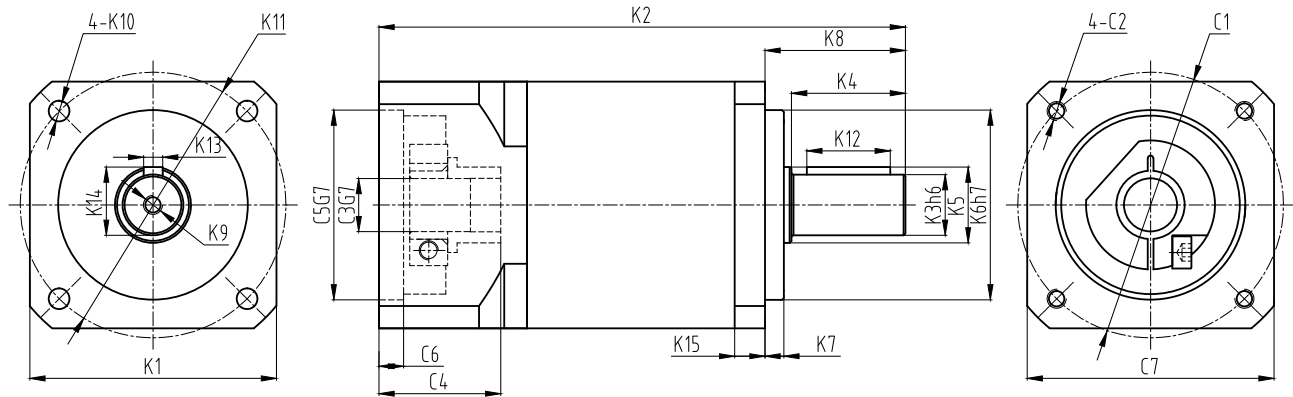
The maximum acceleration torque is equal to 180% of the rated torque.



Model		KPLF050	KPLF070	KPLF090	KPLF120	KPLF160	KPLF205	KPLF235	Ratio	Stage	
Rotational Inertia	kgcm ²	0.031	0.16	0.61	3.25	12.31	28.98	69.61	3	1	
		0.022	0.14	0.48	2.74	7.54	23.67	54.37	4		
		0.019	0.13	0.47	2.71	7.42	22.75	53.27	5		
		0.017	0.13	0.47	2.62	7.25	22.48	50.84	6		
		0.017	0.13	0.47	2.62	7.25	22.48	50.84	7		
		0.017	0.13	0.45	2.62	7.14	22.59	50.84	8		
		0.017	0.13	0.44	2.62	7.14	22.59	50.84	9		
		0.017	0.13	0.44	2.57	7.14	22.55	50.56	10	2	
		0.029	0.127	0.44	2.56	12.35	12.35	28.98	12		
		0.022	0.12	0.43	1.75	7.47	7.54	23.67	16		
		0.019	0.075	0.44	1.5	6.65	7.42	22.75	20		
		0.017	0.075	0.44	1.49	5.81	7.54	22.75	25		
		--	0.064	0.39	1.3	6.34	7.14	22.59	32		
		0.016	0.064	0.39	1.3	5.36	7.14	22.59	35		
		--	0.064	0.39	1.3	4.08	7.14	22.59	40	3	
		0.016	0.064	0.39	1.3	5.36	7.14	22.59	45		
		0.016	0.064	0.39	1.3	4.08	7.14	22.59	50		
		0.016	0.075	0.39	1.5	7.5	7.54	22.59	64		
		0.019	0.075	0.44	1.49	7.4	7.54	22.75	80		
		0.019	0.064	0.44	1.45	7.3	7.42	22.59	100		
		0.019	0.064	0.44	1.3	7.3	7.42	22.75	125		
0.016	0.064	0.39	1.3	6.5	7.14	22.75	160	3			
0.016	0.064	0.39	1.3	6.2	7.14	22.75	200				
0.016	0.064	0.39	1.3	5.7	7.14	22.75	256				
0.016	0.064	0.39	1.3	5.4	7.14	22.75	320				
0.016	0.064	0.39	1.3	5.4	7.14	22.59	512				
Backlash	arcmin	--	≤3	≤3	≤3	≤3	≤3	≤3	High Precision	1	
		≤6	≤6	≤6	≤6	≤6	≤6	≤6	Standard Precision		
		--	≤5	≤5	≤5	≤5	≤5	≤5	≤5	High Precision	2
		≤8	≤8	≤8	≤8	≤8	≤8	≤8	≤8	Standard Precision	
		--	≤7	≤7	≤7	≤7	≤7	≤7	≤7	High Precision	3
		≤12	≤10	≤10	≤10	≤10	≤10	≤10	≤10	Standard Precision	
Torsional Rigidity	Nm/arcmin	3	7	14	25	50	140	220			
Noise	dB(A)	56	58	60	63	65	67	70			
Max Input Speed	min ⁻¹	8000	6000	6000	6000	6000	4000	4000			
Rated Input Speed	min ⁻¹	4000	3000	3000	3000	3000	3000	2000			

The subscript "1" the environment temperature is 20°C.
The subscript "2" sound in n1<3000min⁻¹, measured at 1 m.

KPLF Series Servo Planetary Gearbox Standard Size



Model	KPLF050			KPLF070			KPLF090			KPLF120			KPLF160			KPLF205			KPLF235		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	52			70			89			120			175			210			240		
K2	88.5	103.5	118.8	115	138.7	162.4	138	169.3	200.6	198	239.8	248	275.5	336.5	356	288	348	409	358	402	462
K3	φ12			φ16			φ22			φ32			φ40			φ55			φ75		
K4	23			30			36			50			80			82			105		
K5	φ15			φ20			φ30			φ40			φ55			φ60			φ85		
K6	φ40			φ50			φ80			φ110			φ130			φ180			φ235		
K7	4			5			10			12			15			15			18		
K8	28			37			48			65			97			100			126		
K9	M3X9			M5X12			M6X16			M10X22			M12X25			M20X40			M20X40		
K10	φ4.5			φ5.5			φ6.5			φ9			φ11			φ13			φ17		
K11	φ60			φ85			φ100			φ130			φ185			φ230			φ275		
K12	16			22			28			40			70			70			90		
K13	4			5			6			10			12			16			20		
K14	13.5			18			24.5			35			43			59			79.5		
K15	5			8			10			14			15			18			18		
C1	φ46			φ70			φ90			φ145	φ90	φ200	φ145	φ215	φ200	φ235	φ215	φ200	φ235	φ215	φ200
C2	M4X10			M5X12			M6X15			M8X20	M6X15	M12X25	M8X20	M12X25	M12X25	M12X25	M12X25	M12X25	M12X25	M12X25	M12X25
C3	φ8			φ14			φ19			φ24	φ19	φ35	φ24	φ42	φ35	φ55	φ42	φ35	φ55	φ42	φ35
C4	26.1			32.1			41.6			61.3	41.6	82	61.3	82.5	82	116	82.5	82	116	82.5	82
C5	φ30			φ50			φ70			φ110	φ70	φ114.3	φ110	φ180	φ114.3	φ200	φ180	φ114.3	φ200	φ180	φ114.3
C6	5			6.5			6.5			8	6.5	8	8	8	8	8	8	8	8	8	8
C7	50			70			89			120	89	175	120	190	175	220	190	175	220	190	175