KVX

SERIES SERVO PLANETARY GEARBOX

KVX is our highly successful high precision gearbox series. All KVX gears adopt the alloy forged steel as the raw material, the powerful heat treatment, the latest helical gear design, full needle roller bearings, and global top level gear grinding craft. Perfect integrated design of caged planetary carrier and output shaft to realize high rigidity. For any high precision applications, KVX 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

- Extremely high precision gearing and powerful stability.
- 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.

KVX Technical Data

Model		KVX065	KVX085	KVX115	KVX142	KVX180	KVX220	Ratio	Stage
Nominal Output Torque	Nm	46	125	210	350	650	1200	3	1
		52	145	300	550	1250	1800	4	
		55	155	320	650	1200	2050	5	
		50*	145*	300*	610*	1000*	1850*	6	
		50*	135	290*	540	1000	1750*	7	
		45	115	255	510*	1000*	1550	8	
		42	105*	220*	440	910	1500*	9	
		42	105	220	440	910	1500	10	
		56	125	310	500	650	1200	12	2
		50	125	310	500	850	1200	15	
		52	145	300	550	1250	1800	16	
		55	145	300	650	1200	2050	20	
		55	155	320	650	1200	2050	25	
		52	145	305	550*	1250*	1800*	32	
		55*	155	320*	650	1200	2050	35	
		55	155	320	550*	1200*	2050*	40	
		55*	155	320*	650	1200	2050	45	
		55	155	320	650	1200	2050	50	
		45	115	255	510/63	1000/63	1550	64	
		52	155	320	650	1200	2050	80	3
		52	155	320	650	1200	2050	100	
		52	155	320	650	1200	2050	125	
		52	155	320	650	1200/140	2050/140	160	
		52	155	320	650	1200/180	2050/180	200	
		52	155	320	650/224	1200/252	2050/252	256	
		52	155	320	650/280	1200/315	2050/315	320	
		45	115	255	510/504	1000/441	1550/504	512	
Emergency Stop Torque	Nm	Triple Rated Output Torque							
Max Radial Force[1]	N	1500	3200	6700	9600	14000	16000		
Max Axial Force[1]	N	760	1600	3300	4800	7000	8000		
Operating Temperature	℃	−25~90							
Mouting Position		Any Directions							
Lubrication		Synthetic Lubrication Grease							
Protection Class		IP65							
Efficiency at full load	%	95							1
		92							2
		89							3
Service Lifetime	h	20,000 (Continuous Operation)							
Unit Weight	kg	2.2	5.3	8.5	26	41	68		1
		2.4	6.5	12	31	49	78		2
		3.6	7.5	15	35	54	90		3

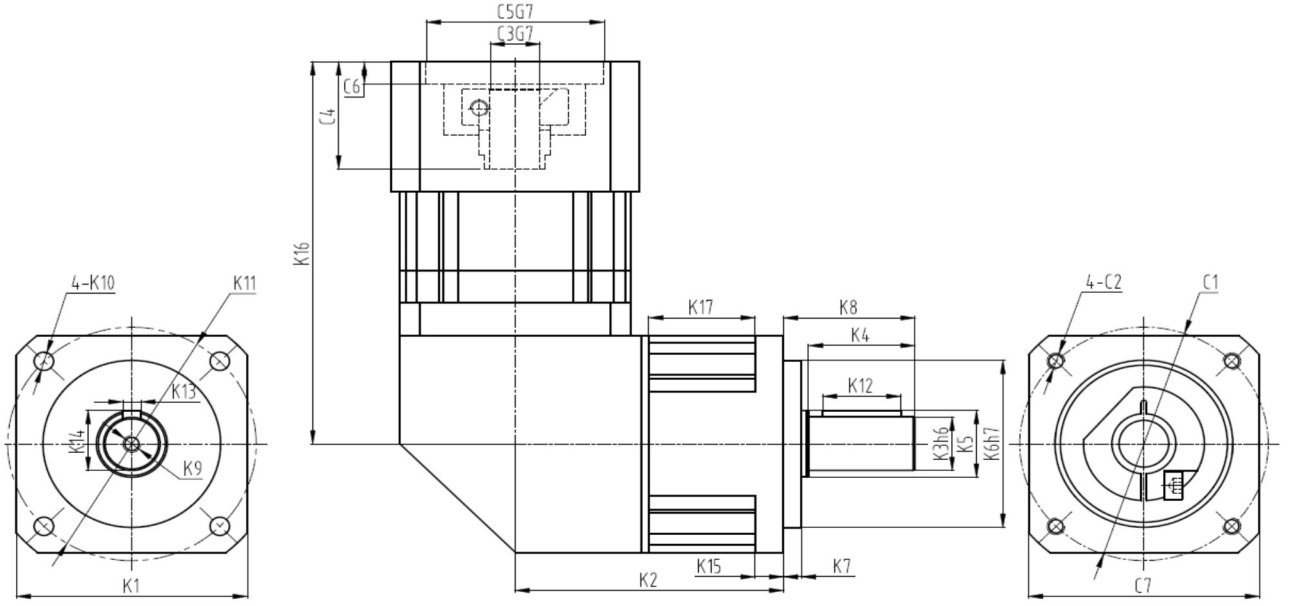
1. Values based on the output shaft speed n2=100 RPM

KVX Technical Data

Model		KVX065	KVX085	KVX115	KVX142	KVX180	KVX220	Ratio	Stage
Mass Moment of Inertia	kgcm^2	0.16	0.61	3.25	12.31	28.98	69.61	3	1
		0.14	0.48	2.74	7.54	23.67	54.37	4	
		0.13	0.47	2.71	7.42	22.75	53.27	5	
		0.13	0.47	2.71	7.42	22.75	53.27	6	
		0.13	0.47	2.62	7.25	22.48	50.84	7	
		0.13	0.45	2.62	7.14	22.59	50.84	8	
		0.13	0.44	2.62	7.14	22.59	50.84	9	
		0.13	0.44	2.57	7.14	22.55	50.56	10	
		0.127	0.44	2.56	12.35	12.35	28.98	12	2
		0.124	0.44	2.58	12.35	12.30	28.92	15	
		0.12	0.43	1.75	7.47	7.54	23.67	16	
		0.075	0.44	1.5	6.65	7.42	22.75	20	
		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	
		0.064	0.39	1.3	5.36	7.14	22.59	35	
		0.064	0.39	1.3	4.08	7.14	22.59	40	
		0.064	0.39	1.3	5.36	7.14	22.59	45	
		0.064	0.39	1.3	4.08	7.14	22.59	50	
		0.075	0.39	1.5	7.5	7.54	22.59	64	
		0.075	0.44	1.49	7.4	7.54	22.75	80	3
		0.064	0.44	1.45	7.3	7.42	22.59	100	
		0.064	0.44	1.3	7.3	7.42	22.75	125	
		0.064	0.39	1.3	6.5	7.14	22.75	160	
		0.064	0.39	1.3	6.2	7.14	22.75	200	
		0.064	0.39	1.3	5.7	7.14	22.75	256	
		0.064	0.39	1.3	5.4	7.14	22.75	320	
		0.064	0.39	1.3	5.4	7.14	22.59	512	
Backlash	arcmin	<5	<5	<5	<5	<5	<5	P0	1
		<8	<8	<8	<8	<8	<8	P1	
		<7	<7	<7	<7	<7	<7	P0	2
		<10	<10	<10	<10	<10	<10	P1	
		<9	<9	<9	<9	<9	<9	P0	3
		<12	<12	<12	<12	<12	<12	P1	
Torsional Rigidity	Nm/arcmin	6	12	23	45	130	200		
Running Noise[1]	dB(A)	<63	<65	<68	<70	<72	<75		
Max Input Speed[2]	min^{-1}	6000	6000	6000	6000	3000	3000		
Rated Input Speed[2]	min^{-1}	3000	3000	3000	3000	1500	1500		

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

KVX Dimensions



Model	KVX065			KVX085			KVX115			KVX142			KVX180			KVX220		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	65			85			110			142			180			220		
K2	75.5	93	116.7	95	113.7	145	119.5	154	195.8	141	202	263	202	234	266.5	241	285.5	315
K3	Φ16			Φ22			Φ32			Φ40			Φ55			Φ75		
K4	30			36			50			80			82			105		
K5	Φ20			Φ25			Φ40			Φ50			Φ60			Φ85		
K6	Φ50			Φ80			Φ110			Φ130			Φ160			Φ180		
K7	5			10			12			15			20			30		
K8	37			48			65			97			105			138		
K9	M5X12			M6X16			M10X22			M12X26			M20X40			M20X40		
K10	Φ5.5			Φ6.5			Φ9			Φ11			Φ13			Φ17		
K11	Φ70			Φ100			Φ130			Φ165			Φ215			Φ250		
K12	22			28			40			70			70			90		
K13	5			6			10			12			16			20		
K14	18			24.5			35			43			59			79.5		
K15	8			10			14			15			20			25		
K16	114.5			150			194			246.5			170	145		220	170	145
K17	30	31	54.7	37.5	46.2	77.5	42.5	63	104.8	55	101	149.5	62.5		62.5	76	76	76
C1	Φ70			Φ90			Φ145			Φ200			Φ215	Φ200		Φ235	Φ215	Φ200
C2	M5X12			M6X15			M8X20			M12X12			M12X25	M12X25		M12X25	M12X25	M12X25
C3	Φ14			Φ19			Φ24			Φ35			Φ42	Φ35		Φ55	Φ42	Φ35
C4	32.1			41.3			61.3			81.3			82.5	81.3		116	82.5	81.3
C5	Φ50			Φ70			Φ110			Φ114.3			Φ180	Φ114.3		Φ200	Φ180	Φ114.3
C6	6.5			6.5			8			6.5			8	8		8	8	8
C7	65			85			120			175			190	175		220	190	175

Order Instructions

Order Code: KVX – 120 – 2 – 15 – S1 – P0 – Servo Motor

KVX

Gearbox Series: KVX

120

Gearbox Size

2

Gearbox Stage

15

Gearbox Ratio

S1

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

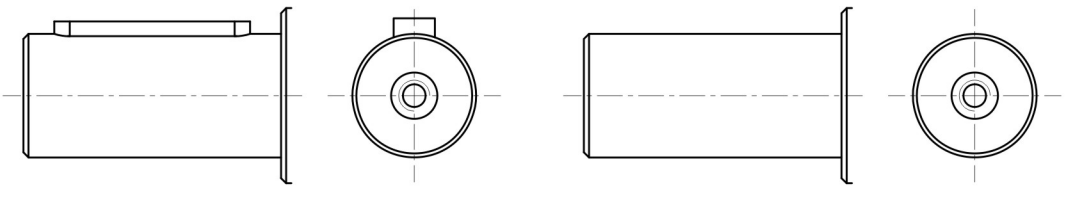
P0

Gearbox Precision

Servo Motor

Motor Manufacturer and model

Output Shaft Key Option



S1: Output shaft with key

S2: Output shaft without key

Ordering Example: KVX120-2-15-S1-P2-ABB-8M1230

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

Solution Memo



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www.kofon-motion.com