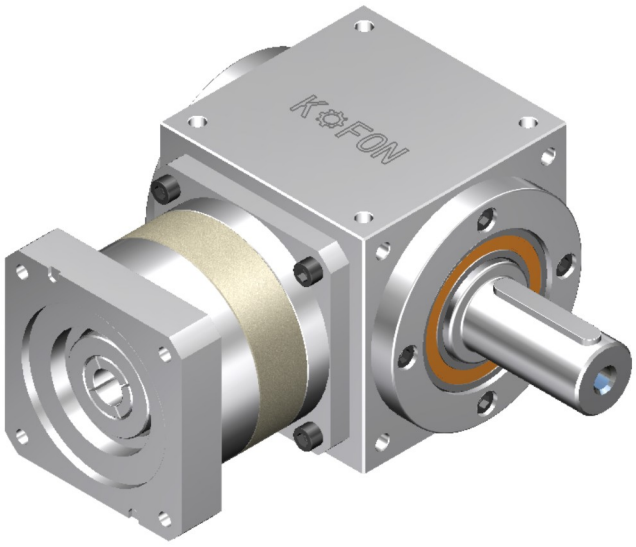
KTFR1

SPRIAL BEVEL GEARBOX



Gearbox Options

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

Gearbox Features

- High precision spiral bevel 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.

KTFR1 Technical Data

Model		KT070FR1	KT090FR1	KT110FR1	KT140FR1	KT170FR1	KT210FR1	KT240FR1	Ratio	Stage
Rated Output Torque	Nm	45	78	150	360	585	1300	2150	1	1
		42	68	150	330	544	1220	2010	2	
		33	54	120	270	450	1020	1650	3	
		28	48	100	224	376	860	1410	4	
		25	40	85	196	320	740	1200	5	
		20	35	65	150	260	600	950	6	
		42	68	150	330	544	1220	2010	8	2
		42	68	150	330	544	1220	2010	10	
		42	68	150	330	544	1220	2010	16	
		42	54	150	330	544	1220	1650	20	
		33	54	120	270	450	1020	1650	24	
		33	68	120	270	450	1020	2010	30	
		42	68	150	330	544	1220	2010	32	3
		42	68	150	330	544	1220	2010	40	
		42	68	150	330	544	1220	2010	50	
		42	68	150	330	544	1220	2010	60	
		42	68	150	330	544	1220	2010	80	
		42	68	150	330	544	1220	2010	100	
		33	54	120	270	450	1020	1650	120	4
		42	68	150	330	544	1220	2010	160	
		42	68	150	330	544	1220	2010	200	
		42	68	150	330	544	1220	2010	250	
		42	68	150	330	544	1220	2010	320	
		42	68	150	330	544	1220	2010	400	
Fault stop torque[1]	Nm	Double rated output torque							1~400	1~4
Backlash	arcmin	≤6	≤6	≤6	≤6	≤6	≤8	≤10	1~6	1
		≤8	≤8	≤8	≤8	≤8	≤10	≤12	8~30	2
		≤10	≤10	≤10	≤10	≤10	≤15	≤15	32~120	3
		≤15	≤15	≤15	≤15	≤20	≤20	≤20	160~400	4
Output maximum radial force[2]	N	1100	1700	2700	4800	6600	11500	16000	1~400	1~4
Output maximum axial force[2]	N	550	850	1350	2400	3300	5750	8500	1~400	1~4
Average life span	hr	20000							1~4	1
Single stage efficiency	%	≥98%							1~4	1

KTFR1 Technical Data

Model		KT070FR1	KT090FR1	KT110FR1	KT140FR1	KT170FR1	KT210FR1	KT240FR1	Ratio	Stage
Noise[3]	dB(A)	⩽72	⩽76	⩽77	⩽78	⩽79	⩽81	⩽83	1~4	1
Max imput speed[4]	rpm	3500	3500	3000	3000	2500	2000	1800	1~4	1
		6000	6000	6000	6000	6000	6000	4000	8~400	2~4
Rated input speed[4]	rpm	2500	2500	2000	2000	1500	1500	1200	1~4	1
		3000	3000	3000	3000	3000	3000	2000	8~400	2~4
Moment of inertia	$kgcm^2$	1.3	3.16	7.7	23.57	58.99	195.4	369.34	1	1
		1.11	2.7	6.31	17.75	45.35	140.24	149.74	2	1
		1.09	2.66	6.17	17.18	44.01	134.95	237.71	3	1
		1.09	2.65	6.13	17.06	43.7	133.58	234.72	4	1
		0.91	2.52	5.8	16.08	40.25	130.2	230.52	5	1
		0.82	2.4	5.2	15.32	38.56	120.53	220.45	6	1
		0.15	0.5	2.79	2.79	2.79	9.91	29.26	8~30	2
		0.14	0.48	2.8	2.8	2.8	9.96	29.43	32~120	3
		0.13	0.46	2.8	2.8	2.8	9.96	29.43	160~400	4
Weight	kg	4.1	6.5	11.9	20.3	35.5	68.3	99.6	1~6	1
		4.5	7.3	14.1	23.9	37.9	73.2	110.8	8~30	2
		5.1	9.2	15.8	26.5	38.2	72.3	115.6	32~120	3
		6.3	10	18.2	28.2	39.4	75.2	118.5	160~400	4

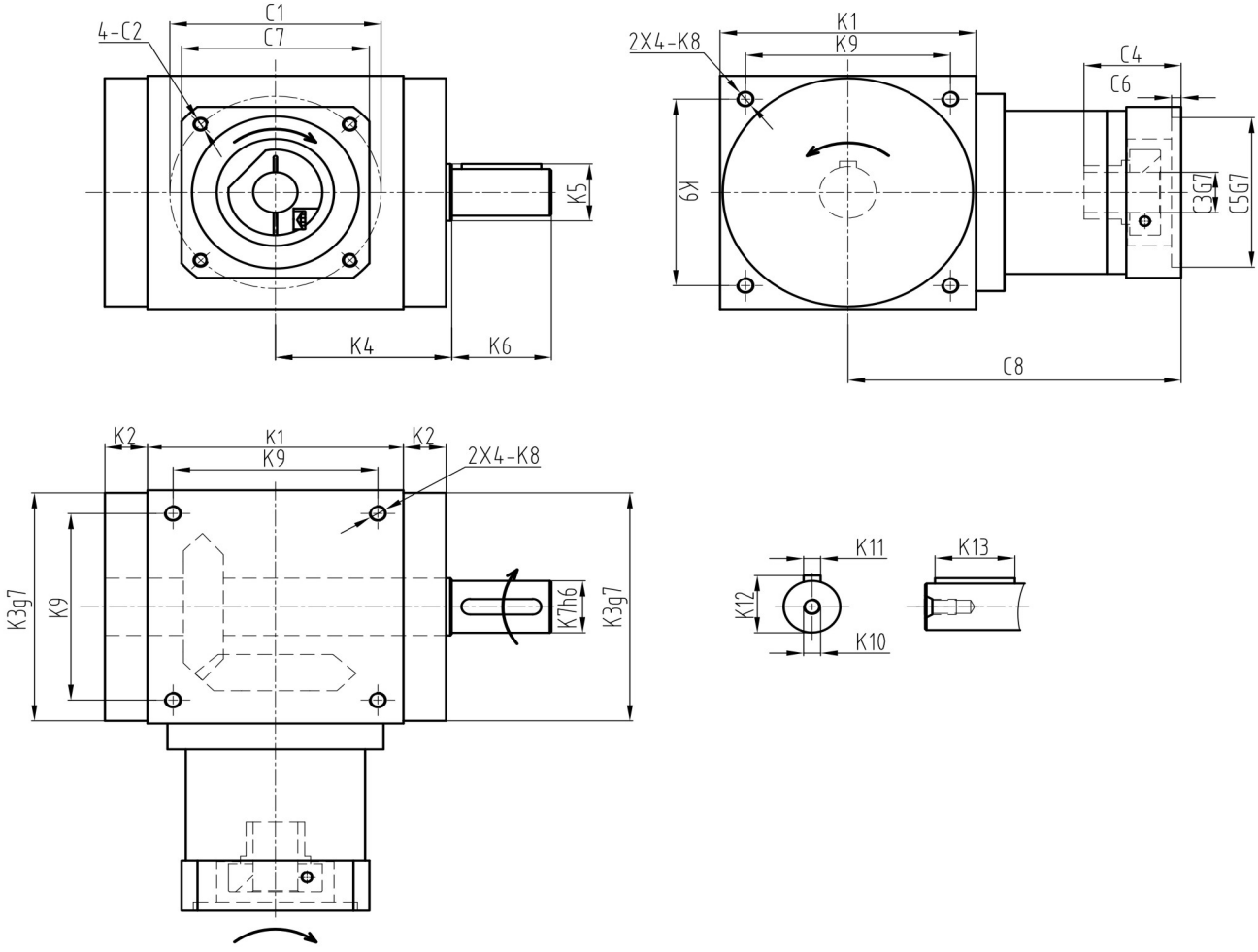
1 the subscript “1” maximum acceleration torque is equal to the failure to stop torque 50%

1 the subscript “2” at the speed of 100RPM, acting on the center axis (L/2) permissible radial force and axial force

1 the subscript “3” noise in n1=3000min^{-1}, measured at 1 m

1 the subscript “4” the environment temperature is 20 DEG C

KTFR1 Dimensions



Size	KT070FR1	KT090FR1	KT110FR1	KT140FR1	KT170FR1	KT210FR1	KT240FR1
K1	75	90	110	140	170	210	240
K2	14.5	15	15	15	15	20	25
K3	ϕ73	ϕ88	ϕ108	ϕ135	ϕ165	ϕ205	ϕ235
K4	54	62	72	87	102	127	147
K5	ϕ22	ϕ25	ϕ30	ϕ47	ϕ55	ϕ75	ϕ85
K6	30	35	40	50	60	75	85
K7	ϕ16	ϕ18	ϕ22	ϕ32	ϕ40	ϕ50	ϕ55
K8	M6X8	M6X15	M8X10	M10X13	M12X20	M16X25	M16X35
K9	60	72	88	110	134	170	190
K10	M5X12.5	M5X12.5	M8X19	M12X28	M16X36	M16X36	M16X36
K11	5	6	6	10	12	14	16
K12	18	20.5	24.5	35	43	53.5	59
K13	25	28	32	45	50	70	80

Size	KT070FR1	KT090FR1	KT110FR1	KT140FR1	KT170FR1	KT210FR1	KT240FR1
Connection Dimensions of Single Stage Reduction Motor							
C1	ϕ70	ϕ90	ϕ90	ϕ145	ϕ145	ϕ200	ϕ215
C2	M5X12	M6X15	M6X15	M8X20	M8X20	M12X25	M12X25
C3	ϕ14	ϕ19	ϕ19	ϕ24	ϕ24	ϕ35	ϕ42
C4	32.1	41.6	41.6	61.3	61.3	82	82.5
C5	ϕ50	ϕ70	ϕ70	ϕ110	ϕ110	ϕ114.3	ϕ180
C6	6.5	6.5	6.5	8	8	8	8
C7	70	85	89	120	120	175	190
C8	115.5	135	145	203	218	283.5	308
Connection Dimensions of Two-stage Reduction Motor							
C1	ϕ70	ϕ90	ϕ90	ϕ145	ϕ145	ϕ200	ϕ215
C2	M5X12	M6X15	M6X15	M8X20	M8X20	M12X25	M12X25
C3	ϕ14	ϕ19	ϕ19	ϕ24	ϕ24	ϕ35	ϕ42
C4	32.1	41.6	41.6	61.3	61.3	82	82.5
C5	ϕ50	ϕ70	ϕ70	ϕ110	ϕ110	ϕ114.3	ϕ180
C6	6.5	6.5	6.5	8	8	8	8
C7	70	85	89	120	120	175	190
C8	115.5	135	145	203	218	283.5	308
Connection Dimensions of Three-stage Reduction Motor							
C1	ϕ70	ϕ90	ϕ90	ϕ145	ϕ145	ϕ200	ϕ200
C2	M5X12	M6X15	M6X15	M8X20	M8X20	M12X25	M12X25
C3	ϕ14	ϕ19	ϕ19	ϕ24	ϕ24	ϕ35	ϕ35
C4	32.1	41.6	41.6	61.3	61.3	82	82
C5	ϕ50	ϕ70	ϕ70	ϕ110	ϕ110	ϕ114.3	ϕ114.3
C6	6.5	6.5	6.5	8	8	8	8
C7	70	85	89	120	120	175	175
C8	139.2	166.3	176.3	244.8	259.8	344.5	368
Connection Dimensions of Four-stage Reduction Motor							
C1	ϕ70	ϕ90	ϕ90	ϕ90	ϕ90	ϕ145	ϕ200
C2	M5X12	M6X15	M6X15	M6X15	M6X15	M8X20	M12X25
C3	ϕ14	ϕ19	ϕ19	ϕ19	ϕ19	ϕ24	ϕ35
C4	32.1	41.6	41.6	41.6	41.6	61.3	82
C5	ϕ50	ϕ70	ϕ70	ϕ70	ϕ70	ϕ110	ϕ114.3
C6	6.5	6.5	6.5	6.5	6.5	8	8
C7	70	85	89	89	89	120	175
C8	162.9	197.6	207.6	253	268	364	429

Order Instructions

Order Code: KT – FL – 4 – S1 – MOTOR

KT

Product series: KT

FL

Deceleration type:
FL、FL1、FR1、FH、FC、L、L1、R1、H、C

4

Gearbox Ratio

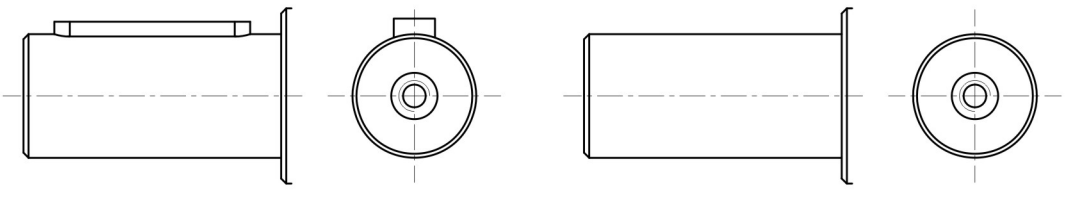
S1

Shaft output form of the S1: Smooth Output Shaft, not specified for the keyed shaft

Motor

Motor adapter, not specified for the standard size

Output Shaft Key Option



S1: Output shaft with key

S2: Output shaft without key

Ordering Example: KPL120-2-15-S1-P2-ABB-8M1230

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

KOFON

www.kofon-motion.com

Solution Memo

