



TUNYO

KR系列斜齒輪減速電機

KF系列平行軸-斜齒輪減速電機

KH系列斜齒軸-傘齒輪減速電機

KS系列斜齒軸-蝸輪減速電機

東洋K系列斜齒輪減速電機選型手冊
TUNYO K Series Helical Gear Motor Hand Book

TUNYO INTELLIGENT DEVICE CO.,LTD

TUNYO
The Power Of Dream

品質成就領先
技術服務社會

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* Our company's products always develop in time, if there are some changes about size, we will not inform you again. So please contact us.

K系列斜齒輪減速電機 K Series Helical Gear Motor

東洋K系列電機分類 TUNYO K series motor classification



KR系列斜齒輪減速電機



KF系列平行軸-斜齒輪減速電機



KH系列斜齒輪-傘齒減速電機



KS系列斜齒輪-蝸輪減速電機

產品說明 Product Description

1.1 性能特点

1. 采用了系列化、模块化的设计，传动比覆盖范围广、分级精细；
2. 传动效率高，耗能低、性能优越；
3. 齿轮经高精度磨齿机磨削加工，传动平稳、噪音低，承载能力大、寿命长；
4. 设计精巧：体积小，安装简便，用途广泛；
5. 安装方式多样，适合全方位的万能安装配置；
6. 可实现KR、KF、KH、KS系列与KRF系列双联体组合，适用于特殊低速的应用。

1.2 主要材料

1. 箱体：HT250高强度铸铁。射型内腔，有效减少零件磨损；
2. 齿轮：20CrMo优质合金钢，碳氮共渗处理（精磨后保持齿面硬度HRC60）；
3. 平键：45钢，表面硬度HRC50。

1.3 减速器效率

1. 由于采用了高精度齿轮、油封、轴承，有效降低了摩擦，齿轮传动的级间效率可达97%；
2. 在某些安装方式时，输入级齿轮完全浸在润滑油中，对于大机座号和高输入转速的情况，须考虑搅油损失。

1.4 使用条件

1. 环境温度-40 ~ 50 ℃（0℃以下启动时润滑油需加热到0℃以上或采用防冻润滑油）；
2. 输入转速不大于2800转/分；
3. 可用于正反转；
4. 无行业限制。

1.1 Performance Characteristics

1. Systematic and modular design; Transmission ratio with fine stage covers a wide range.
2. High efficiency; Low energy consumption; Superior performance.
3. High Precision gear with teeth grinding; Stable transmission; Low noise; Strong bearing capacity; Long Service life.
4. Deft design: Small volume; Simple Installation; Wide usage.
5. Suitable for all kinds of mounting positions
6. KR..,KF..,KH..,KS.. and KRF.. conjoined combination for special low speed.

1.2 Material

1. Housing: High strength cast iron HT250, die casting lumen, reduce the abrasion of parts.
2. Gears: 20CrMo, Carbonitriding, Teeth hardness: HRC 60 after grinding.
3. Flat keys: C45, Surface hardness: HRC 50.

1.3 Gear Unit Efficiency

1. High precision gear; seals; bearings; Effectively reduces friction; Stage efficiency of gear drive reaches 97%.
2. For some ways of mounting, the input gear is completely immersed in the lubricant, please consider the churning loss when it comes to big frame size and high input speed.

1.4 Working Conditions

1. Ambient temperature -40 ~ 50℃ (if lower than 0℃, need to heat the lubrication higher than 0℃ or use anti freezing lubricant).
2. Input rotation speed $\leq$ 2800r/min.
3. Both Rotation Direction.
4. No industry limit.

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1.5 选型表注释 / Selection Table Explanation

性能参数表结构说明 / Performance Parameter Table Structure

P_1 [kW]	n_2 [1/min]	M_2 [Nm]	i	Fr [N]	K	Frame size	Input Configuration
↓	↓ 输出转速 Output speed	↓ 输出扭矩 Output torque	↓ 减速比 Ratio	↓ 径向载荷 Permitted Overhung load Output side	↓ 服务系数 Service factor	↓ 机座规格 Frame size	↓ 输入配置 Input Configuration
电机功率 Power of motor							

性能参数表结构说明 / Performance Parameter Table Structure

M_{2max} [Nm]	n_2 [1/min]	i	Fr [N]	Frame size	Motor
↓ 极限输出扭矩 Max. Permitted Output torque	↓ 输出转速 Output speed	↓ 减速比 Ratio	↓ 径向载荷 Permitted Overhung load Output side	↓ 机座规格 Frame size	↓ 电机型号 Motor type

功率配置表结构说明 / Power Combination

n_2 [1/min]	M_{2max} [Nm]	Fr [N]	i	功率 Power	功率 Power	功率 Power	功率 Power	功率 Power	功率 Power
↓ 输出转速 Output speed	↓ 极限输出扭矩 Max. Permitted Output torque	↓ 径向载荷 Permitted Overhung load Output side	↓ 减速比 Ratio						

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1. 6. 潤滑油 / Lubrication

1. 6. 1 潤滑油類型 / Types of Lubrication

	環境溫度(℃) Ambient Temperature(℃)	ISO粘度 ISO Viscosity Class	 SHELL	 Mobil MOBIL	 bp BP	潤滑油類型 Lubrication Type
KR KF KH KS	-40 ~ +10	VG 220	Shell Omala 200	Mobilgear 630	BP Energol GR-XP 220	礦物油 Mineral Oil
	-20 ~ +25	VG 150 VG 100	Shell Omala 100	Mobilgear 627	BP Energol GR-XP 100	
	-30 ~ +10	VG68-46 VG 32	Shell Tellus 32	Mobil D.T.E 13M		
	-40 ~ -20	VG 22 VG 15	Shell Tellus 32	Mobil D.T.E 11M	BP Energol HLP-HM 15	
	-40 ~ +80	VG 220	Shell Tellus 32	Mobil SHC 630		合成油 Synthetic Oil
	-40 ~ +10	VG 32		Mobil SHC 624		

1. 6. 2 潤滑油量表

規定的加注量為參考值。精確值的變化與級數和傳動比有關。請您在加注潤滑油時一定要注意油位螺栓所指示的精確油量。後期調整安裝方式時，您必須根據改變後的安裝方式相應調整加注潤滑劑。下表中列出了安裝方式M1-M6的減速器相應的標準參考潤滑油注入量值。

1. 6. 2 Lubricant Fill Quantity

The specified fill quantities are recommended values. The precise value varies depending on the number of stages and gear ratio. When filling, it is essential to check the oil level plug since it indicates the precise oil capacity. The following tables show guide values For lubricant fill quantities in relation to the mounting position M1 -M6.

KRX..

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KRX57	0.60	0.80	1.30	1.30	0.90	0.90
KRX67	0.80	0.80	1.70	1.90	1.10	1.10
KRX77	1.10	1.50	2.60	2.70	1.60	1.60
KRX87	1.70	2.50	4.80	4.80	2.90	2.90
KRX97	2.10	3.40	7.40	7.00	4.80	4.80
KRX107	3.90	5.60	11.6	11.9	7.70	7.70

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KRXF..

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KRXF57	0.50	0.80	1.10	1.10	0.70	0.70
KRXF67	0.70	0.80	1.50	1.40	1.00	1.00
KRXF77	0.90	1.30	2.40	2.00	1.60	1.60
KRXF87	1.60	1.95	4.90	3.95	2.90	2.90
KRXF97	2.10	3.70	7.10	6.30	4.80	4.80
KRXF107	3.10	5.70	11.2	9.30	7.20	7.20

KR../KR..F

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1 ①	M2 ①	M3	M4	M5	M6
KR..07	0.12	0.20	0.20	0.20	0.20	0.20
KR..17	0.25	0.55	0.35	0.55	0.35	0.40
KR..27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
KR..37	0.30/0.95	0.85	0.95	1.05	0.75	0.95
KR..47	0.70/1.50	1.60	1.50	1.65	1.50	1.50
KR..57	0.80/1.70	1.90	1.70	2.10	1.70	1.70
KR..67	1.10/2.30	2.40/3.20	2.80	2.90	1.80	2.00
KR..77	1.20/3.00	3.30/4.20	3.60	3.80	2.50	3.40
KR..87	2.30/6.00	6.40/8.10	7.20	7.20	6.30	6.50
KR..97	4.60/9.80	11.7/14.0	11.7	13.4	11.3	11.7
KR..107	6.00/13.7	16.3	16.9	19.2	13.2	15.9
KR..137	10.0/25.0	28.0	29.5	31.5	25.0	25.0
KR..147	15.4/40.0	46.5	48.0	52.0	39.5	41.0
KR..167	27.0/70.0	82.0	78.0	88.0	66.0	69.0

KRF..

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1 ①	M2 ①	M3	M4	M5	M6
KRF07	0.12	0.20	0.20	0.20	0.20	0.20
KRF17	0.25	0.55	0.35	0.55	0.35	0.40
KRF27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
KRF37	0.35/0.95	0.90	0.95	1.05	0.75	0.95
KRF47	0.65/1.50	1.60	1.50	1.65	1.50	1.50
KRF57	0.80/1.70	1.80	1.70	2.00	1.70	1.70
KRF67	1.20/2.50	2.50/3.20	2.70	2.80	1.90	2.10
KRF77	1.20/2.60	3.10/4.10	3.30	3.60	2.40	3.00
KRF87	2.40/6.00	6.40/8.20	7.10	7.20	6.30	6.40
KRF97	5.10/10.2	11.9/14.0	11.2	14.0	11.2	11.8
KRF107	6.30/14.9	15.9	17.0	19.2	13.1	15.9
KRF137	9.50/25.0	27.0	29.0	32.5	25.0	25.0
KRF147	16.4/42.0	47.0	48.0	52.0	42.0	42.0
KRF167	26.0/70.0	82.0	78.0	88.0	65.0	71.0

① The larger gear unit of multi-stage gear units must be filled with the larger oil volume

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KF.,KFA..B,KFH..B,KFV..B

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KF..27	0.60	0.80	0.65	0.70	0.60	0.60
KF..37	0.95	1.25	0.70	1.25	1.00	1.10
KF..47	1.50	1.80	1.10	1.90	1.50	1.70
KF..57	2.60	3.50	2.10	3.50	2.80	2.90
KF..67	2.70	3.80	1.90	3.80	2.90	3.20
KF..77	5.90	7.30	4.30	8.00	6.00	6.30
KF..87	10.8	13.0	7.70	13.8	10.8	11.0
KF..97	18.5	22.5	12.6	25.2	18.5	20.0
KF..107	24.5	32.0	19.5	37.5	27.0	27.0
KF..127	40.5	55.0	34.0	61.0	46.3	47.0
KF..157	69.0	104	63.0	105	86.0	78.0

KFF..

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KFF27	0.60	0.80	0.65	0.70	0.60	0.60
KFF37	1.00	1.25	0.70	1.30	1.00	1.10
KFF47	1.60	1.85	1.10	1.90	1.50	1.70
KFF57	2.80	3.50	2.10	3.70	2.90	3.00
KFF67	2.70	3.80	1.90	3.80	2.90	3.20
KFF77	5.90	7.30	4.30	8.10	6.00	6.30
KFF87	10.8	13.2	7.80	14.1	11.0	11.2
KFF97	19.0	22.5	12.6	25.5	18.9	20.5
KFF107	25.5	32.0	19.5	38.5	27.5	28.0
KFF127	41.5	55.5	34.0	63.0	46.5	49.0
KFF157	72.0	105	64.0	106	87.0	79.0

KFA...,KFH...,KFV...,KFAF...,KFHF...,KFVF...,KFAZ...,KFHZ...,KFVZ...

減速器型號 Gear units	加注量 Fill quantity in liters 單位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KF..27	0.60	0.80	0.65	0.70	0.60	0.60
KF..37	0.95	1.25	0.70	1.25	1.00	1.10
KF..47	1.50	1.80	1.10	1.90	1.50	1.70
KF..57	2.70	3.50	2.10	3.40	2.90	3.00
KF..67	2.70	3.80	1.90	3.80	2.90	3.20
KF..77	5.90	7.30	4.30	8.00	6.00	6.30
KF..87	10.8	13.0	7.70	13.8	10.8	11.0
KF..97	18.5	22.5	12.6	25.2	18.5	20.0
KF..107	24.5	32.0	19.5	37.5	27.0	27.0
KF..127	39.0	54.5	34.0	61.0	45.0	46.5
KF..157	68.0	103	62.0	104	85.0	79.5

K系列斜齒輪減速電機 K Series Helical Gear Motor

KH...KHA...B,KHH...B,KHV...B

減速器型號 Gear units	加注量 Fill quantity in liters		單位:升(L) Unit: L			
	M1	M2	M3	M4	M5	M6
KH..37	0.50	1.00	1.00	1.25	0.95	0.95
KH..47	0.80	1.30	1.50	2.00	1.60	1.60
KH..57	1.10	2.20	2.20	2.80	2.30	2.10
KH..67	1.10	2.40	2.60	3.45	2.60	2.60
KH..77	2.20	4.10	4.40	5.80	4.20	4.40
KH..87	3.70	8.00	8.70	10.9	8.00	8.00
KH..97	7.00	14.0	15.7	20.0	15.7	15.5
KH..107	10.0	21.0	25.5	33.5	24.0	24.0
KH..127	21.0	41.5	44.0	54.0	40.0	41.0
KH..157	31.0	62.0	65.0	90.0	58.0	62.0
KH..167	33.0	95.0	105.0	123.0	85.0	84.0
KH..187	53.0	152.0	167.0	200.0	143.0	143.0

KHF..

減速器型號 Gear units	加注量 Fill quantity in liters		單位:升(L) Unit: L			
	M1	M2	M3	M4	M5	M6
KHF37	0.50	1.10	1.10	1.50	1.00	1.00
KHF47	0.80	1.30	1.70	2.20	1.60	1.60
KHF57	1.20	2.20	2.40	3.15	2.50	2.30
KHF67	1.10	2.40	2.80	3.70	2.70	2.70
KHF77	2.10	4.10	4.40	5.90	4.50	4.50
KHF87	3.70	8.20	9.00	11.9	8.40	8.40
KHF97	7.00	14.7	17.3	21.5	15.7	16.5
KHF107	10.0	21.8	25.8	35.1	25.2	25.2
KHF127	21.0	41.5	46.0	55.0	41.0	41.0
KHF157	31.0	66.0	69.0	92.0	62.0	62.0

KHA...KHH...KHV...KHA...KHHF...KHVF...KHAZ...KHHZ...KHVZ...

減速器型號 Gear units	加注量 Fill quantity in liters		單位:升(L) Unit: L			
	M1	M2	M3	M4	M5	M6
KH..37	0.50	1.00	1.00	1.40	1.00	1.00
KH..47	0.80	1.30	1.60	2.10	1.60	1.60
KH..57	1.30	2.30	2.70	3.20	2.90	2.70
KH..67	1.10	2.40	2.70	3.60	2.60	2.60
KH..77	2.10	4.10	4.60	6.00	4.40	4.40
KH..87	3.70	8.20	8.80	11.1	8.00	8.00
KH..97	7.00	14.7	15.7	20.0	15.7	15.7
KH..107	10.0	20.5	24.0	32.0	24.0	24.0
KH..127	21.0	41.5	43.0	52.0	40.0	40.0
KH..157	31.0	66.0	67.0	87.0	62.0	62.0
KH..167	33.0	95.0	105.0	123.0	85.0	84.0
KH..187	53.0	152.0	167.0	200.0	143.0	143.0

K系列斜齒輪減速電機 K Series Helical Gear Motor

KS..

減速器型号 Gear units	加注量 Fill quantity in liters 单位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KS37	0.25	0.40	0.50	0.55	0.40	0.40
KS47	0.35	0.80	0.70/0.90	1.00	0.80	0.80
KS57	0.50	1.20	1.00/1.20	1.45	1.30	1.30
KS67	1.00	2.00	2.20/3.10	3.10	2.60	2.60
KS77	1.90	4.20	3.70/5.40	5.90	4.40	4.40
KS87	3.30	8.10	6.90/10.4	11.3	8.40	8.40
KS97	6.80	15.0	13.4/18.0	21.8	17.0	17.0

KSF..

減速器型号 Gear units	加注量 Fill quantity in liters 单位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KSF37	0.25	0.40	0.50	0.55	0.40	0.40
KSF47	0.40	0.90	0.90/1.05	1.05	1.00	1.00
KSF57	0.50	1.20	1.00/1.50	1.55	1.40	1.40
KSF67	1.00	2.20	2.30/3.00	3.20	2.70	2.70
KSF77	1.90	4.10	3.90/5.80	6.50	4.90	4.90
KSF87	3.80	8.00	7.10/10.1	12.0	9.10	9.10
KSF97	7.40	15.0	13.8/18.8	22.6	18.0	18.0

KSA...,KSH..., KSAF...,KSHF..., KSAZ...,KSHZ..

減速器型号 Gear units	加注量 Fill quantity in liters 单位:升(L) Unit: L					
	M1	M2	M3	M4	M5	M6
KS..37	0.25	0.40	0.50	0.50	0.40	0.40
KS..47	0.40	0.80	0.70/0.90	1.00	0.80	0.80
KS..57	0.50	1.10	1.00/1.50	1.50	1.20	1.20
KS..67	1.00	2.00	1.80/2.60	2.90	2.50	2.50
KS..77	1.80	3.90	3.60/5.00	5.80	4.50	4.50
KS..87	3.80	7.40	6.00/8.70	10.8	8.00	8.00
KS..97	7.00	14.0	11.4/16.0	20.5	15.7	15.7

TUNYO



東洋KS斜齒輪-蝸輪減速電機 TUNYO KS HELICAL- WORM GEARED MOTOR

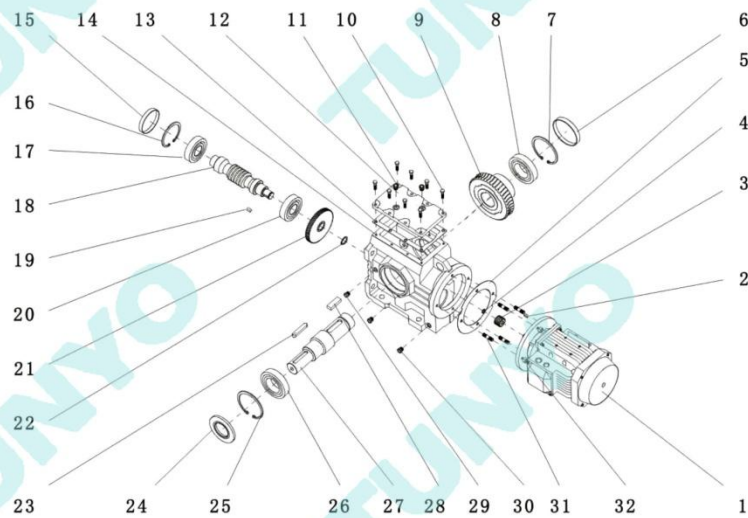
PROFESSIONAL MANUFACTURER OF POWER TRANSMISSION

DESIGN PHILOSOPHY: To follow the law, but always beyond.

BUSINESS PHILOSOPHY: Design for customer demand , dedication for customer satisfaction

K系列斜齒輪減速電機 K Series Helical Gear Motor

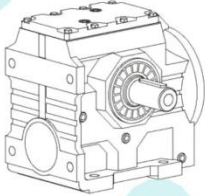
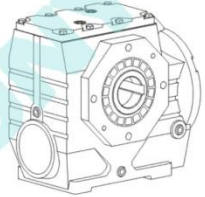
5.1 部件分解圖 / Spare Parts List



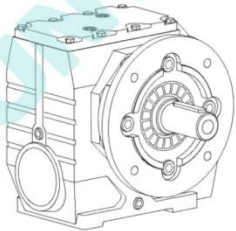
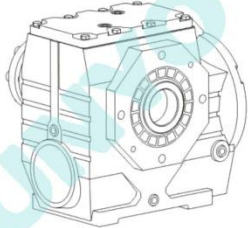
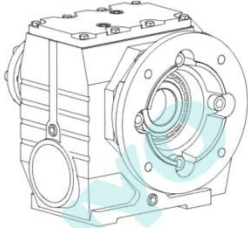
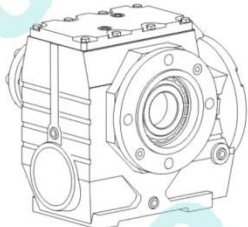
- | | |
|-----------------------------------|-----------------------------------|
| 1 电机/motor | 17 轴承/bearing |
| 2 平键/flat key | 18 蜗杆/worm |
| 3 齿轮/gear | 19 平键/flat key |
| 4 轴用挡圈/retaining rings for shaft | 20 轴承/bearing |
| 5 纸垫/gasket | 21 齿轮/gear |
| 6 平面油封/plan seal | 22 轴用挡圈/retaining rings for shaft |
| 7 孔用挡圈/retaining rings for bores | 23 平键/flat key |
| 8 轴承/bearing | 24 骨架油封/skeleton oil seal |
| 9 蜗轮/worm gear | 25 孔用挡圈/retaining rings for bores |
| 10 外六角螺钉/hex head screws | 26 轴承/bearing |
| 11 油塞/oil level plug | 27 输出轴/output shaft |
| 12 盖板/cover plate | 28 平键/flat key |
| 13 纸垫/gasket | 29 油塞/oil level plug |
| 14 箱体/housing | 30 油塞/oil level plug |
| 15 平面油封/plan seal | 31 双头螺柱/stud |
| 16 孔用挡圈/retaining rings for bores | 32 六角螺母/hexagon nut |

2 机型版本 / Versions

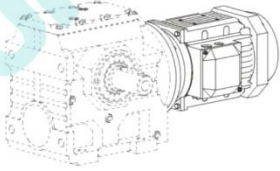
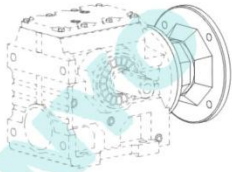
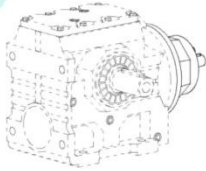
2.1 基本型式 / Basic Versions

	KS.. 底脚安装斜齿轮-蜗轮蜗杆减速机 Foot-mounted helical worm geared units.
	KSA.. 空心轴安装斜齿轮-蜗轮蜗杆减速机 Helical-worm geared units with hollow shaft.
	KSAF.. B5法兰空心轴安装斜齿轮-蜗轮蜗杆减速机 Helical-worm geared units in B5 flange mounted version with hollow shaft.
	KSAZ.. B14法兰空心轴安装斜齿轮-蜗轮蜗杆减速机 Helical-worm geared units in B14 flange mounted version with hollow shaft.

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

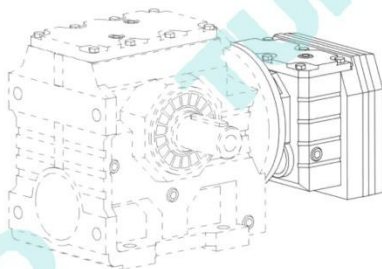
	KSF.. B5法兰安装斜齒輪-蜗輪蜗杆減速機 Helical-worm geared units in B5 flange mounted version.
	KSH.. 空心軸鎖緊盤安裝斜齒輪-蜗輪蜗杆減速機 Helical-worm geared units with hollow shaft and shrink disk.
	KSHF.. B5法兰空心軸鎖緊盤安裝斜齒輪-蜗輪蜗杆減速機 Helical-worm geared units in B5 flange-mounted version with hollow shaft and shrink disk.
	KSHZ.. B14法兰空心軸鎖緊盤安裝斜齒輪-蜗輪蜗杆減速機 Helical-worm geared units in B14 flange-mounted version with hollow shaft and shrink disk.

5.2.2 輸入型式 / Input Versions

	KS..Y.. 直聯電機輸入 Input with geared motors.
	KS..AM.. AM (IEC) 法蘭輸入 Input with AM adapters for mounting IEC motors.
	KS..AD.. AD 軸輸入 Input with AD shaft assembly.

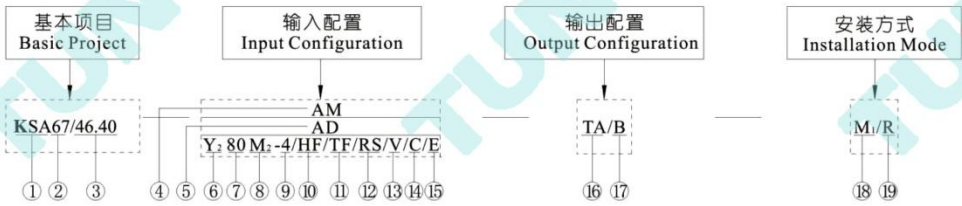
5.2.3 KS..與 KRF..組合 / KS.. and KRF.. Combination

當需要特別低速輸出時，可選擇 KRF 齒輪箱作為 KS 齒輪箱的輸入。
If special low speed is needed, KRF.. gearbox can be the input of KS.. Gearbox.



K系列斜齒輪減速電機
K Series Helical Gear Reduction Motor

5.3 产品标注 / Product Code



	标号 NO.	含义 Meaning	说明 Explanation
基本项目 Basic Project	①	系列代号 Series Code	KS、KSF、KSA... (详见5.2.1) KS,KSF,KSA...(see 5.2.1).
	②	机座号 Frame Size	机座号: 37、47、57... Frame Size: 37, 47, 57...
	③	传动比 Transmission Ratio	传动比 i Transmission Ratio I.
输入配置 Input Configuration	④	法兰输入代号 Flange Input Code	AM(IEC): 63、71、80...
	⑤	轴输入代号 Shaft Input Code	AD: 1、2、3...
	⑥	电机代号 Motor Code	Y2: 三相异步电动机 Y2: Three Phase Asynchronous Motor. YD: 变极多速三相异步电动机 YD: Variable-pole Multi-speed Three Phase Asynchronous Motor. YS: 小功率三相异步电动机 YS: Small Power Three Phase Asynchronous Motor. YVF2: 变频调速三相异步电动机 YVF2: Variable Frequency Speed Control Three Phase Asynchronous Motor. YEJ: 电磁制动三相异步电动机 YEJ: Electromagnetic Brake Three Phase Asynchronous Motor. YB2: 隔爆三相异步电动机 YB2: Flame Proof Three Phase Asynchronous Motor.
	⑦	电机机座号 Motor Frame Size.	63、71、80...
	⑧	电机定子铁芯长度代号 Length Code of Stator Core.	M、M1、M2、S、S1、S2、L、L1、L2
	⑨	电机极数 Pole Number of Motor.	2、4、6、8

K系列斜齒輪減速電機

K Series Helical Gear Reduction Motor

	标号 NO.	含义 Meaning	说明 Explanation
输入配置 Input Configuration	⑩	手动释放装置 Manual Release Device	无代码: 无手动释放装置 No Code: No manual release device. HF: 手动释放装置带自锁功能 HF: Manual release device with self-locking Function. HR: 手动释放装置不带自锁功能 HR: Manual release device without self-Locking function.
	⑪	电机热保护装置 Motor Heat-protection Device.	无代码: 无电机热保护装置 No Code: No motor heat-protection device. TF: 电机热保护装置 TF: Motor heat-protection device.
	⑫	逆止器 Backstop	无代码: 无逆止器 No Code: No backstop. RS: 逆止器 RS: Backstop.
	⑬	强制冷却风扇 Forced Cooling Fan	无代码: 无强制冷却风扇 No Code: no forced cooling fan. V: 强制冷却风扇 V: Forced cooling fan.
	⑭	防雨罩 Cover	无代码: 无风扇防护罩 No Code: No fan cover. C: 防雨罩 C: cover.
	⑮	编码器 Encoder	无代码: 无编码器 No Code: No encoder. E: 编码器 E: Encoder
输出配置 Output Configuration	⑯	扭力臂 Torque Arm	无代码: 无扭力臂 No Code: No torque arm. TA: 扭力臂指向A TA: Torque arm pointing to A. TB: 扭力臂指向B TB: Torque arm pointing to B.
	⑰	法兰或轴指向 Flange or Shaft Pointing direction.	A: 法兰或轴指向A A: Flange or shaft pointing to A. B: 法兰或轴指向B B: Flange or shaft pointing to B. A+B: 双出轴或双法兰 A+B: Double flange or shaft.
安装方式 Mounting Positions	⑱	安装方位 Mounting Position	M1、M2、M3、M4、M5、M6
	⑲	电机接线盒方位 Position for motor terminal box.	R、B、L、T

说明:

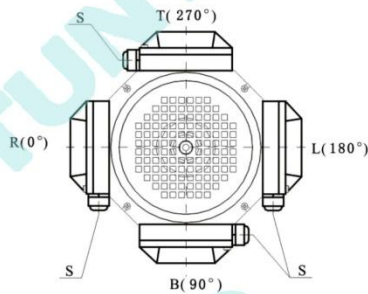
1. 基本项目不可省略;
2. 输入配置中, 只能在 AM、AD 和电机之间选择一种;
3. 输出配置参数若省略, 默认按A方向提供;
4. 安装方式参数若省略, 默认按 M1 安装方位, R 接线盒方位提供。

Notes:

1. Basic project can not be omitted.
2. Input configuration can only be one of AM, AD and motor.
3. If no output configuration, default pointing direction will be A.
4. If not mounting position, default mounting position will be M1, default position for motor terminal will be R.

5.4 安装方位 / Mounting Positions

5.4.1 电机接线盒方位 / Position of Motor Terminal Box



R(0°): 默认接线盒方位

R(0°): Default Position for Motor Terminal Box

注: 图为M1安装方位。

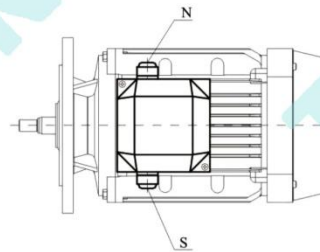
Mark: This picture is the installation position of M1

说明:

上图的视图方向为: 从电机尾部的风罩向前看。

可提供 R (0°)、B (90°)、L (180°)、T (270°) 四种电机接线盒方位。其中 R (0°) 位置是默认方位。如无特别说明, 将按默认方位提供。

可提供 S 和 N 两种进线方位, 其中 S 位置是默认方位。如无特别说明, 将按默认方位提供。



S: 默认进线方位

S: Default Line Position

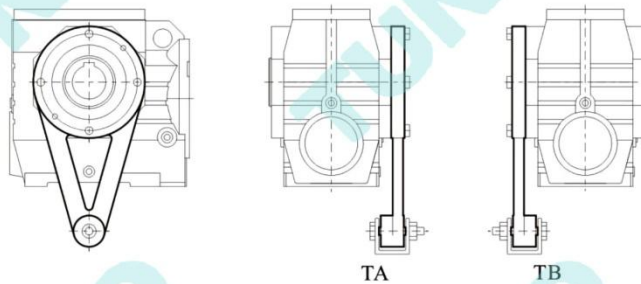
Notes:

The view direction of above figure: from the fan cover in the end of the motor to look forward.

There will be four position for motor terminal box: R(0°)、B(90°)、L(180°)、T(270°). And default position is R(0°). If no special explanation, it will be provided in default position. If no special explanation, it will be provided in default position.

There will be two line position: S and N. Default position is S. If no special explanation, it will be provided in default position. If no special explanation, it will be provided in default position.

5.4.2 扭力臂方位 / Position of Torque Arm



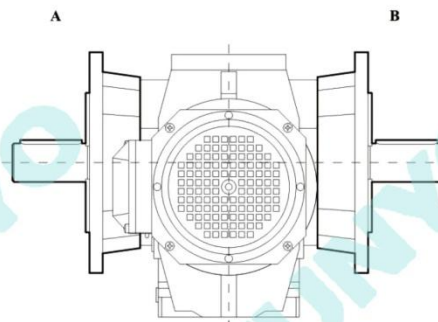
说明:

扭力臂方位 TA 与 TB 是对称的。

Notes:

TA and TB are symmetrical.

5.4.3 法兰或轴指向 / Position of The Output Shaft and Flange



说明:

上图的视图方向为：从电机尾部的风罩向前看。

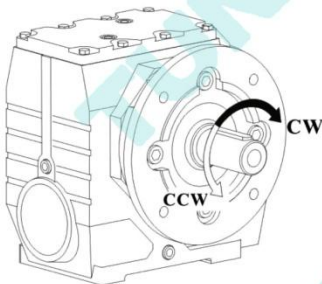
可提供 A、B 或 A+B 三种输出法兰或输出轴的方位。

Notes:

The view direction of above figure is from the fan cover in the end of the motor to look forward.

There are three positions: A or B or A+B.

5. 4. 4 輸出軸旋轉方向 / Direction of Rotation of Output Shaft.



說明：

當減速電機帶逆止器時，需規定輸出軸的旋轉方向。

上圖中，從輸出軸觀看，順時針旋轉規定為CW；逆時針旋轉規定為CCW。

當減速電機採用 A+B 方式輸出時（見 5. 4. 3），需指出給定的旋轉方向是從 A 端觀看還是從 B 端觀看。

Notes:

It is necessary to stipulate the direction of rotation of the output shaft if the drive has a back stop.

For above figure, the following definition applies: Looking onto the output shaft.

CW = Rotating Clockwise

CCW = Rotation Counter-clockwise

If the position of the output shaft or flange is A+B, it is necessary to stipulate for certain direction of rotation, it was looked on the A or B.

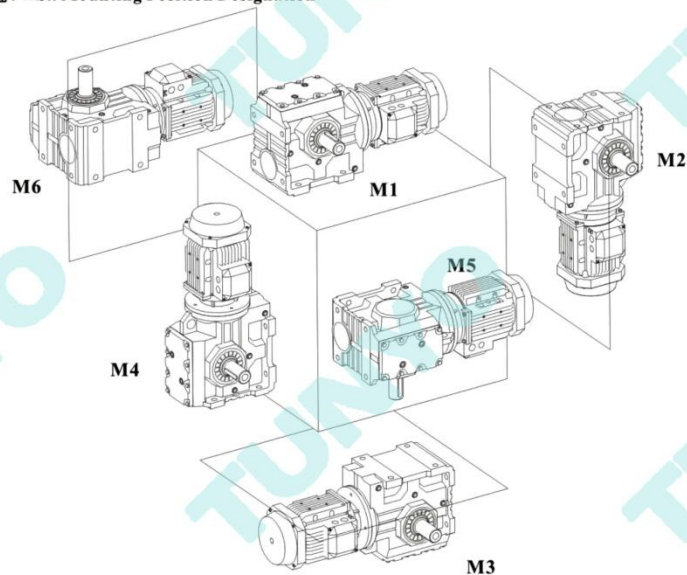
5. 4. 5 油位符號說明 / Oil Level Symbol Explanation

符號 Symbol	含義	Meaning
	通氣帽	BREATHER VALVE
	油標	OIL LEVEL PLUG
	排油塞	OIL DRAIN PLUG

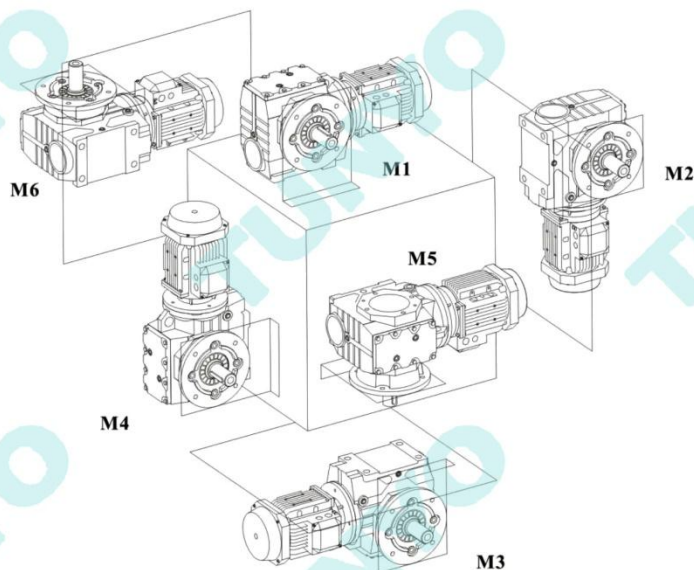
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

5. 4. 6 安裝位置示意 / Mounting Position Designation

KS..安裝位置示意图 / KS.. Mounting Position Designation



KSF..安裝位置示意图 / KSF.. Mounting Position Designation



K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

5.4.7 安裝方位 / Mounting Positions

*→提示:

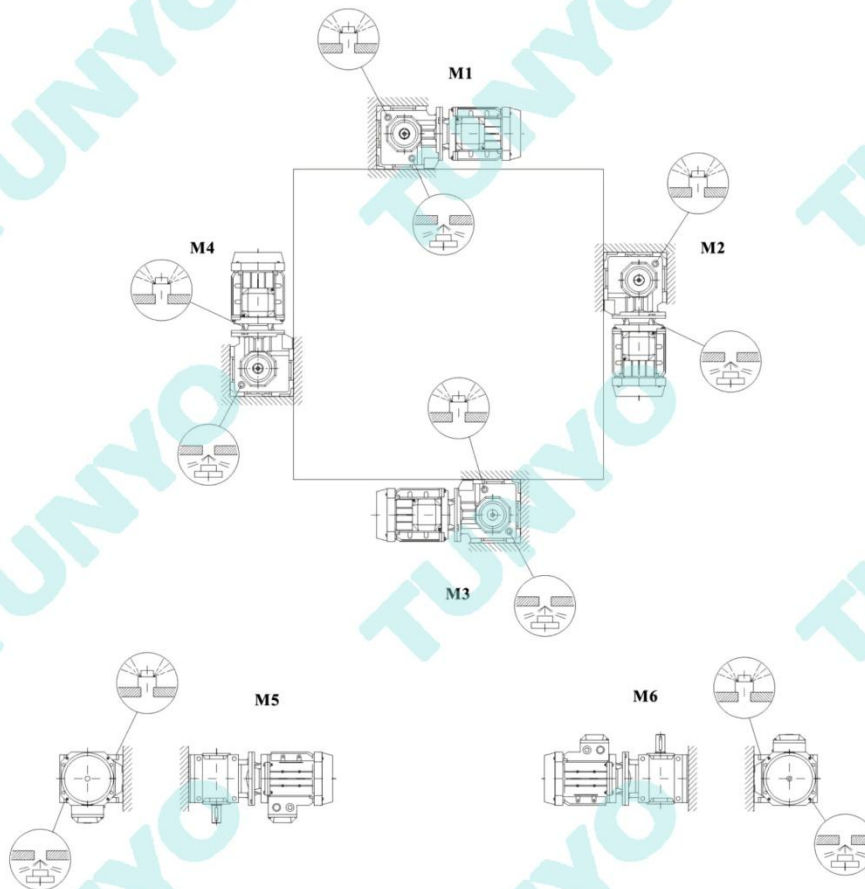
当采用下表列出的安装方式及输入转速时，齿轮箱会产生不可忽视的搅油损失。请联系本公司。

*→Reminder:

Increased churning losses may arise in the following mounting positions. Contact Greatwall Machinery.

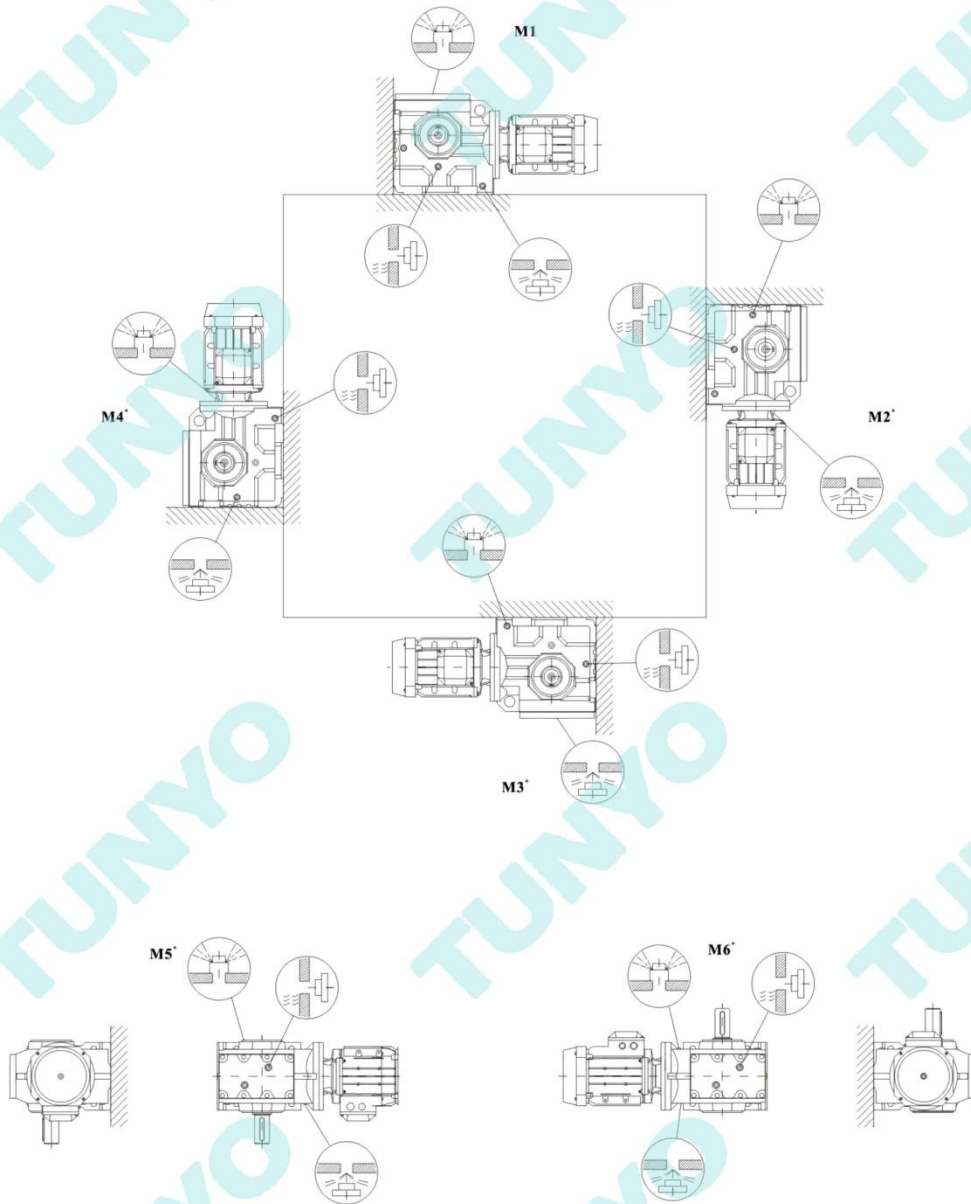
安装方式 Mounting Position	齿轮箱规格 Gear Unit Size	输入转速 Input Speed (r/min)
M2, M3, M4, M5, M6	77-97	>2500

KS37



K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

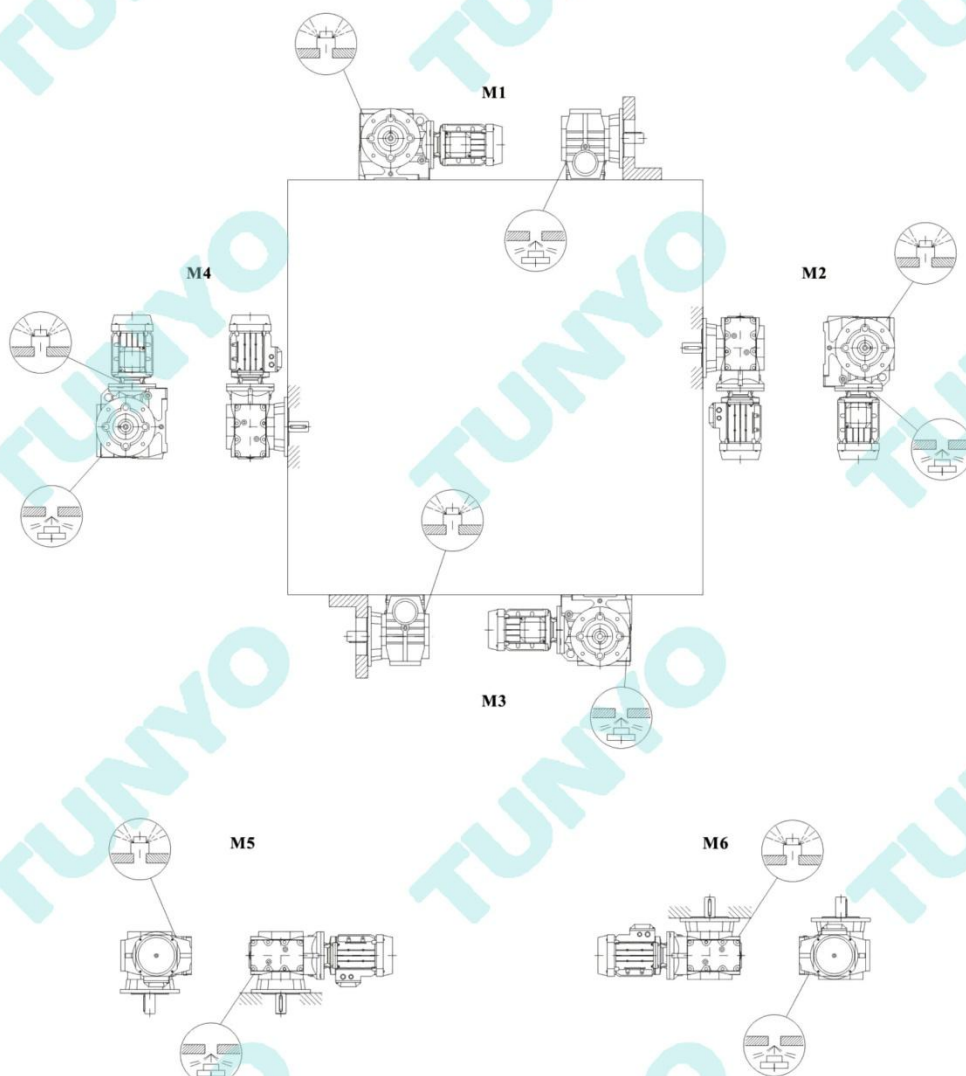
KS47~97



*→page 225

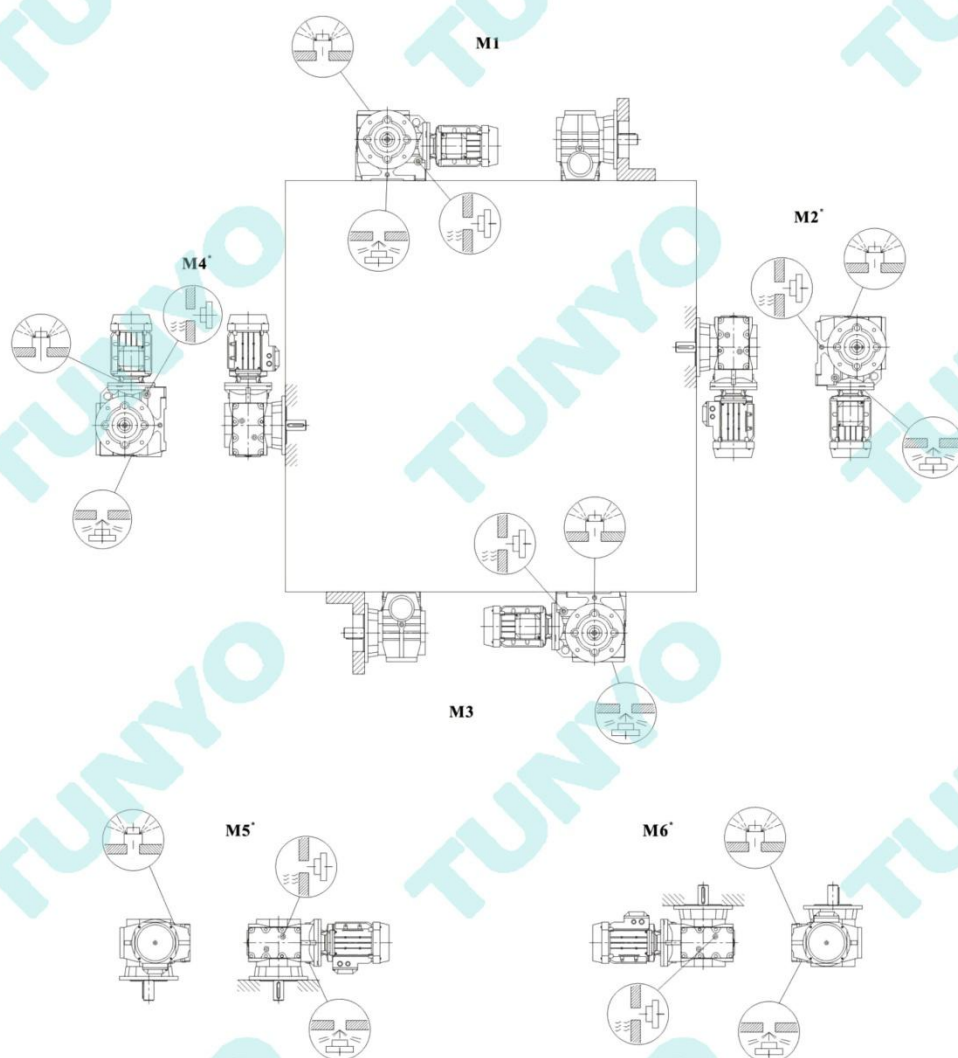
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

KSF/KSAF/KSHF37



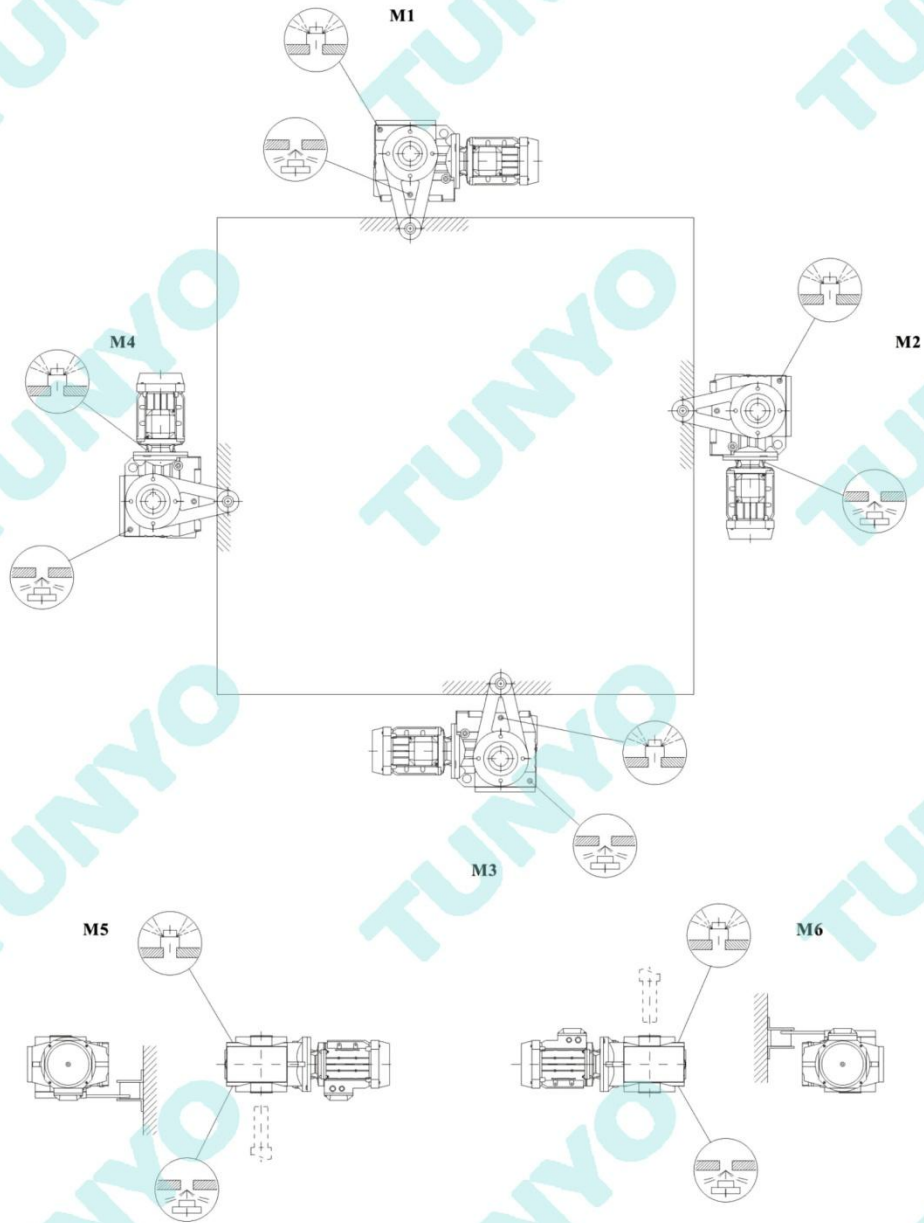
K系列斜齒輪減速電機
K Series Helical Gear Reduction Motor

KSF/KSAF/KSHF/KSAZ47~97



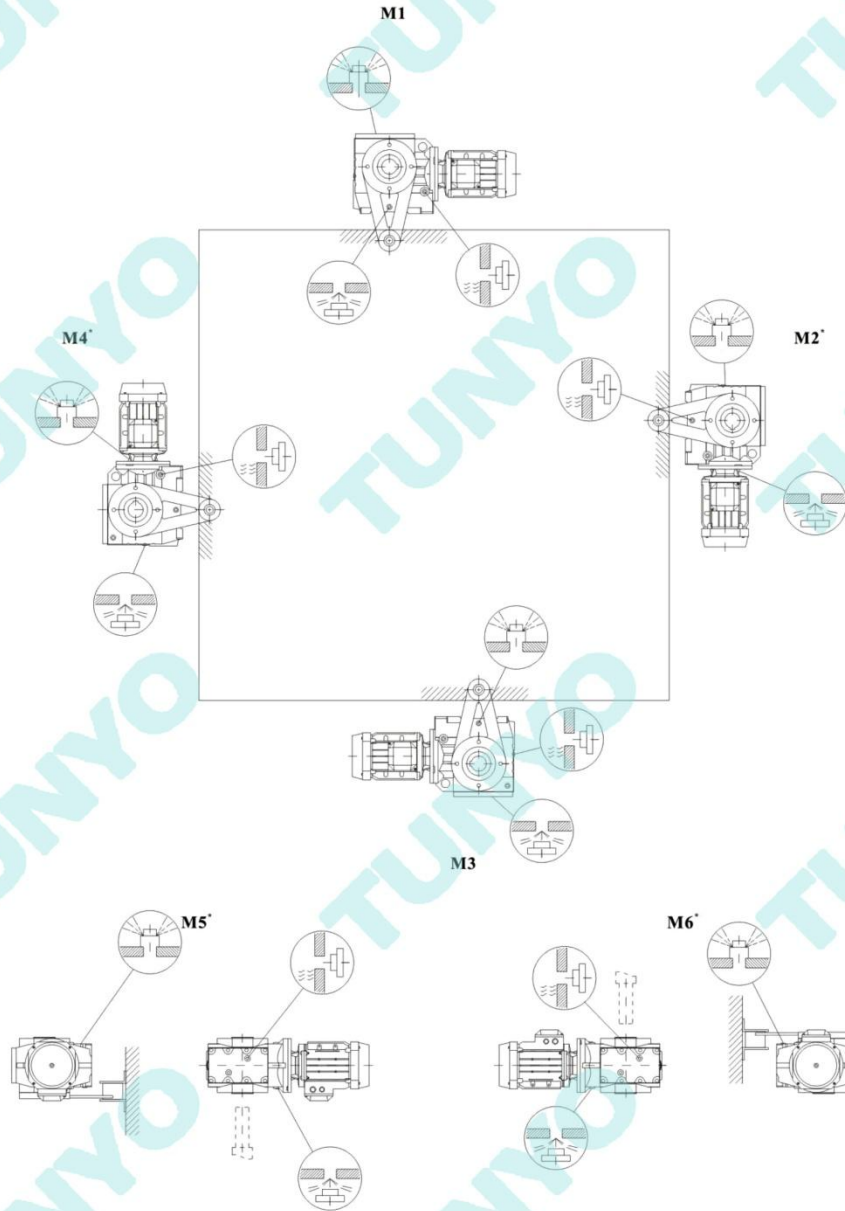
K系列斜齒輪減速電機
K Series Helical Gear Reduction Motor

KSA/KSH37/T



K系列斜齒輪減速電機
K Series Helical Gear Reduction Motor

KSA/KSH47-97/T



5.5 減速器組合表 / Gear Unit Combination Table

為得到特別低的輸出轉速，可以通過KRF齒輪箱與KS齒輪箱相連的方式實現。

當採用這種傳動方案時，可配置電動機的功率依賴於減速機的極限輸出扭矩，而不能通過電動機的額定功率和減速機的總傳動比計算得出減速機的輸出扭矩。

KRF series of gear units and KS series of gear units can be connected together to get special output speed.

For this transmission scheme, the power of the motor depends on the limit output torque of the gear-box, instead of the output torque calculated based on rated power of the motor and the transmission ratio of the gear unit.

KS..與KRF..齒輪箱可能的組合 / Possible Combination of KS.. and KRF..

	KRF17	KRF27	KRF37	KRF47	KRF57
KS..37					
KS..47					
KS..57					
KS..67					
KS..77					
KS..87					
KS..97					

說明：

- ：表示可能的組合。
：表示不允許的組合。

Notes:

- ：Possible Combination.
：Impossible Combination.

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

5. 6 KS..功率配置 / KS..Power Configuration

KS37 $n_1=1400$ 1/min 92Nm									
n_2 [1/min]	M_{max} [Nm]	Fr [N]	i	0.12 ~0.55	0.75 1.10				
8.90	92	3000	157.43						
9.70	92	3000	144.40						
11.0	91	3000	122.94						
13.0	88	3000	106.00						
14.0	87	3000	98.80						
16.0	86	3000	86.36						
17.0	85	3000	80.96						
20.0	84	3000	71.44						
22.0	82	3000	63.33						
25.0	81	3000	55.93						
26.0	80	3000	53.83						
27.0	81	3000	51.30						
32.0	81	3000	43.68						
37.0	79	3000	37.66						
40.0	78	3000	35.10						
46.0	76	2860	30.68						
49.0	75	2800	28.76						
55.0	74	2660	25.38						
62.0	73	2530	22.50						
70.0	52	2470	19.89						
73.0	71	2380	19.13						
77.0	52	2380	18.24						
90.0	50	2240	15.53						
105	49	2110	13.39						
112	48	2060	12.48						
128	48	1940	10.91						
137	47	1900	10.23						
155	46	1810	9.02						
175	45	1730	8.00						
206	43	1630	6.80						
221	35	1670	6.33						
260	34	1570	5.38						
288	33	1520	4.86						
353	32	1400	3.97						
KS47 $n_1=1400$ 1/min 170Nm									
n_2 [1/min]	M_{max} [Nm]	Fr [N]	i	0.12 ~0.55	0.75 1.10	1.50			
7.00	170	5340	201.00						
7.60	170	5340	184.80						
8.90	170	5340	158.12						
10.0	168	5350	137.05						
11.0	168	5350	128.10						

KS47 $n_1=1400$ 1/min 170Nm									
n_2 [1/min]	M_{max} [Nm]	Fr [N]	i	0.12 ~0.55	0.75 1.10	1.50			
13.0	168	5350	110.73						
15.0	168	5350	94.08						
17.0	167	5360	84.00						
20.0	167	5360	71.75						
20.0	155	5370	69.39						
21.0	167	5360	67.20						
22.0	155	5370	63.80						
25.0	165	5320	56.61						
26.0	155	5150	54.59						
30.0	155	4850	47.32						
32.0	155	4710	44.22						
37.0	155	4420	38.23						
43.0	155	4120	32.48						
48.0	155	3920	29.00						
57.0	155	3650	24.77						
60.0	152	3570	23.20						
69.0	110	3370	20.33						
72.0	144	3370	19.54						
79.0	110	3160	17.62						
85.0	110	3060	16.47						
98.0	110	2850	14.24						
116	109	2650	12.10						
130	109	2500	10.80						
152	109	2310	9.23						
162	109	2230	8.64						
192	103	2110	7.28						
205	78	2300	6.83						
KS57 $n_1=1400$ 1/min 295Nm									
n_2 [1/min]	M_{max} [Nm]	Fr [N]	i	0.12 ~0.55	0.75 1.10	1.50	2.20 3.00		
7.00	295	7130	201.00						
7.60	295	7130	184.80						
8.90	295	7130	158.12						
10.0	295	7130	137.05						
11.0	295	7130	128.10						
13.0	295	7130	110.73						
15.0	295	7130	94.08						
17.0	295	7130	84.00						
20.0	290	7170	71.75						
20.0	245	7520	69.39						
21.0	285	7220	67.20						
22.0	245	7520	63.80						

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KS57 $n_1=1400$ 1/min 295Nm									
n_2 [1/min]	M_{2max} [Nm]	Fr [N]	i	0.12 ~0.55	0.75 1.10	1.50	2.20 3.00		
25.0	265	7370	56.61						
26.0	245	7520	54.59						
30.0	245	7520	47.32						
32.0	245	7520	44.22						
37.0	245	7320	38.23						
43.0	245	6840	32.48						
48.0	245	6520	29.00						
57.0	245	6100	24.77						
60.0	245	5930	23.20						
69.0	168	5690	20.33						
72.0	215	5720	19.54						
79.0	168	5350	17.62						
85.0	168	5200	16.47						
98.0	169	4860	14.24						
116	169	4520	12.10						
130	169	4290	10.80						
152	169	3990	9.23						
162	166	3900	8.64						
192	146	3790	7.28						
205	100	4100	6.83						
219	98	4010	6.40						
260	95	3760	5.39						
294	93	3590	4.76						
350	88	3380	4.00						
KS67 $n_1=1400$ 1/min 520Nm									
n_2 [1/min]	M_{2max} [Nm]	Fr [N]	i	0.25 ~0.55	0.75 1.10	1.50	2.20 3.00	4.00	5.50
6.40	520	8680	217.41						
7.40	520	8680	190.11						
7.80	520	8680	180.60						
8.80	520	8680	158.45						
10.0	520	8680	134.40						
12.0	520	8680	121.33						
13.0	520	8680	106.75						
14.0	520	8680	100.80						
16.0	520	8680	85.83						
18.0	520	8680	78.00						
19.0	480	9020	75.06						
21.0	520	8680	67.57						
21.0	480	9020	65.63						
22.0	480	9020	62.35						
24.0	500	8850	58.80						
26.0	480	8670	54.70						
30.0	480	8060	46.40						

KS67 $n_1=1400$ 1/min 520Nm									
n_2 [1/min]	M_{2max} [Nm]	Fr [N]	i	0.25 ~0.55	0.75 1.10	1.50	2.20 3.00	4.00	5.50
33.0	480	7690	41.89						
38.0	480	7250	36.85						
40.0	480	7060	34.80						
47.0	480	6540	29.63						
52.0	480	6240	26.93						
57.0	340	6040	24.44						
60.0	480	5810	23.33						
60.0	340	5890	23.22						
69.0	340	5520	20.37						
69.0	425	5760	20.30						
81.0	340	5080	17.28						
90.0	340	4820	15.60						
102	340	4510	13.73						
108	340	4310	12.96						
127	340	3660	11.03						
140	340	3290	10.03						
161	335	2860	8.69						
185	295	3220	7.56						
KS77 $n_1=1400$ 1/min 1270Nm									
n_2 [1/min]	M_{2max} [Nm]	Fr [N]	i	0.55	0.75 1.10	1.50	2.20 3.00	4.00	5.50 7.50
5.50	1270	11700	256.47						
6.20	1270	11700	225.26						
6.50	1270	11700	214.00						
7.40	1270	11700	189.09						
8.70	1260	11800	161.60						
9.40	1240	12000	148.15						
11.0	1210	12200	130.00						
11.0	1200	12300	123.20						
13.0	1170	12600	107.83						
14.0	1140	12800	97.14						
16.0	1100	13100	85.22						
19.0	1070	12800	75.20						
19.0	1100	11900	75.09						
20.0	1100	11600	71.33						
21.0	1040	12300	66.67						
22.0	1100	10900	63.03						
25.0	990	11600	56.92						
26.0	1100	10100	53.87						
28.0	1100	9650	49.38						
32.0	1100	9010	43.33						
34.0	1100	8750	41.07						
39.0	1100	8140	35.94						
43.0	1090	7720	32.38						

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KS77 $n_1=1400$ 1/min				1270Nm					
n_2 [1/min]	M_{2max} [Nm]	F_r [N]	i	0.55 1.10	0.75 1.50	1.50 3.00	2.20 4.00	5.50 7.50	
49.0	1050	7370	28.41						
56.0	1020	7010	25.07						
61.0	705	5960	22.89						
63.0	980	6740	22.22						
67.0	705	5380	20.99						
74.0	930	6390	18.97						
76.0	705	4550	18.42						
80.0	710	4120	17.45						
92.0	710	3320	15.28						
102	710	2710	13.76						
116	720	1800	12.07						
131	720	1130	10.65						
148	725	415	9.44						
174	680	440	8.06						
KS87 $n_1=1400$ 1/min				2280Nm					
n_2 [1/min]	M_{2max} [Nm]	F_r [N]	i	0.75 1.10	1.50	2.20 3.00	4.00	5.50 7.50	11.0 15.0
4.90	2280	27900	288.00						
5.40	2280	27900	258.18						
6.30	2280	27900	222.40						
6.90	2260	28000	202.96						
7.80	2210	28100	180.00						
9.30	2150	28200	151.30						
10.0	2100	28300	139.05						
11.0	2060	28300	123.48						
13.0	2000	28400	110.40						
14.0	1960	29100	99.26						
15.0	1510	28600	91.20						
16.0	1880	29000	86.15						
17.0	1600	28700	81.76						
18.0	1820	29000	77.14						
20.0	1600	29000	70.43						
22.0	1600	28900	64.27						
22.0	1700	28900	64.00						
25.0	1600	29000	57.00						
29.0	1600	29000	47.91						
32.0	1600	29000	44.03						
36.0	1600	28200	39.10						
40.0	1600	27100	34.96						
45.0	1600	26000	31.43						
51.0	1600	24700	27.28						
55.0	1240	23400	25.50						
57.0	1600	23700	24.43						
65.0	1240	21800	21.43						

KS87 $n_1=1400$ 1/min				2280Nm					
n_2 [1/min]	M_{2max} [Nm]	F_r [N]	i	0.75 1.10	1.50	2.20 3.00	4.00	5.50 7.50	11.0 15.0
69.0	1600	22100	20.27						
71.0	1240	21100	19.70						
80.0	1240	20200	17.49						
90.0	1240	19300	15.64						
100	1240	18500	14.06						
115	1240	17400	12.21						
128	1240	16400	10.93						
154	1140	15900	9.07						
178	1010	15700	7.88						
KS97 $n_1=1400$ 1/min				4000Nm					
n_2 [1/min]	M_{2max} [Nm]	F_r [N]	i	1.50	2.20 3.00	4.00	5.50 7.50	11.0 15.0	18.5 22.0
4.90	4000	33200	286.40						
5.30	4000	33200	262.22						
6.00	4000	33200	231.67						
7.10	4000	33200	196.52						
7.70	3920	33400	180.95						
8.70	3840	33500	161.74						
9.60	3730	33700	145.60						
11.0	3650	33900	131.85						
12.0	3510	34100	116.92						
13.0	3440	34300	105.71						
16.0	3240	34600	89.60						
17.0	3230	34600	80.85						
18.0	3080	34800	78.26						
20.0	3300	34500	71.43						
21.0	2900	35100	65.45						
23.0	3300	34500	60.59						
25.0	3300	34500	55.79						
28.0	3300	34500	49.87						
31.0	3300	34100	44.89						
34.0	3300	32800	40.65						
39.0	3300	31300	36.05						
43.0	3200	30400	32.60						
51.0	3010	29000	27.63						
53.0	2600	26100	26.39						
58.0	2870	28000	24.13						
59.0	2600	24500	23.59						
66.0	2600	22800	21.23						
73.0	2600	21200	19.23						
82.0	2570	19700	17.05						
91.0	2470	19400	15.42						
107	2330	18800	13.07						
123	2210	18400	11.41						
147	2040	18200	9.55						
169	1770	18800	8.26						

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5. 7 KS..性能参数 / KS.. Performance Parameters

n: [1/min]	M _e : [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P ₁ =0.12kw						
0.12	4740	11267	25100	0.90	KS 97 KRF57	Y..63M ₁ -4
0.14	4330	10078	32500	0.95	KSF 97 KRF57	AM63
0.16	3590	8608	34000	1.15	KSA 97 KRF57	AD2
0.18	3180	7554	34700	1.30	KSAF 97 KRF57	
0.21	2690	6706	27100	0.95	KS 87 KRF57	Y..63M ₁ -4
0.23	2400	5875	27700	1.05	KSF 87 KRF57	AM63
0.27	1980	5187	28500	1.25	KSA 87 KRF57	AD2
0.30	1760	4606	28800	1.40	KSAF 87 KRF57	
0.36	1460	3872	29200	1.70		
0.39	1370	3540	7240	0.90		
0.45	1200	3098	12300	1.05		
0.58	1320	2374	10600	0.95	KS 77 KRF37	Y..63M ₁ -4
0.66	1160	2083	12600	1.05	KSF 77 KRF37	AM63
0.76	980	1813	13900	1.25	KSA 77 KRF37	AD2
0.79	930	1745	14200	1.30	KSAF 77 KRF37	
0.86	860	1600	14600	1.45		
0.98	755	1404	15100	1.65		
1.10	660	1245	15500	1.90		
1.20	585	1194	7990	0.95		
1.30	530	1045	8560	1.05		
1.50	455	914	9180	1.25		
1.70	415	809	9460	1.35	KS 67 KRF37	Y..63M ₁ -4
1.90	365	712	9780	1.55	KSF 67 KRF37	AM63
2.20	305	615	10100	1.85	KSA 67 KRF37	AD2
2.50	275	543	10200	2.10	KSAF 67 KRF37	
2.90	225	469	10400	2.50		
3.30	200	424	10500	2.80		
3.80	187	365	10500	3.00		
2.10	325	655	6800	0.90		
2.40	285	574	7200	1.05		
2.70	250	506	7480	1.20	KS 57 KRF17	Y..63M ₁ -4
3.20	215	438	7700	1.40	KSF 57 KRF17	AM63
3.60	189	388	7850	1.60	KSA 57 KRF17	-
4.10	169	336	7950	1.80	KSAF 57 KRF17	
4.70	145	294	8050	2.10		
5.10	139	269	8070	2.20		
3.20	215	438	5010	0.85		
3.60	189	388	5170	1.00		
4.10	168	336	5290	1.10	KS 47 KRF17	Y..63M ₁ -4
4.70	143	294	5420	1.30	KSF 47 KRF17	AM63
5.40	98	257	5660	1.90	KSA 47 KRF17	-
6.00	118	229	5550	1.55	KSAF 47 KRF17	
6.90	102	200	5610	1.80		
7.40	96	187	5640	1.95		
6.80	103	202	3000	0.90		
7.70	91	179	3000	1.00	KS 37 KRF17	Y..63M ₁ -4
8.70	82	158	3000	1.15	KSF 37 KRF17	AM63
9.60	75	144	3000	1.20	KSA 37 KRF17	-
12.0	61	118	3000	1.50	KSAF 37 KRF17	
13.0	57	110	3000	1.60		

n: [1/min]	M _e : [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P ₁ =0.12kw						
6.90	95	201.00	5680	1.80		
7.50	89	184.80	5700	1.90	KS 47	Y..63M ₁ -4
8.70	77	158.12	5740	2.20	KSF 47	AM63
10.0	68	137.05	5780	2.50	KSA 47	AD1
11.0	64	128.10	5790	2.60	KSAF 47	
12.0	57	110.73	5810	3.00		
8.80	74	157.43	3000	1.25		
9.60	68	144.40	3000	1.35	KS 37	Y..63M ₁ -4
11.0	60	122.94	3000	1.55	KSF 37	AM63
13.0	52	106.00	3000	1.70	KSA 37	AD1
14.0	49	98.80	3000	1.75	KSAF 37	
16.0	44	86.36	3000	1.95		
17.0	41	80.96	3000	2.10		
19.0	37	71.44	3000	2.30	KS 37	Y..63M ₁ -4
22.0	33	63.33	3000	2.50	KSF 37	AM63
25.0	35	55.93	3000	2.30	KSA 37	AD1
27.0	33	51.30	3000	2.50		
32.0	28	43.68	3000	2.90		
37.0	24	37.66	3000	3.20		
39.0	23	35.10	3000	3.40	KS 37	Y..63M ₁ -4
45.0	20	30.68	3000	3.70	KSF 37	AM63
48.0	19	28.76	3000	3.90	KSA 37	AD1
54.0	17	25.38	3000	4.40	KSAF 37	
61.0	15	22.50	3000	4.80		
69.0	14	19.89	3000	3.60		
76.0	13	18.24	3000	3.90		
89.0	11	15.53	2870	4.40		
P ₁ =0.18kw						
0.29	3010	4606	19200	0.85		
0.34	2510	3872	27500	1.00		
0.38	2420	3475	27700	1.05	KS 87 KRF57	Y..63M ₁ -4
0.45	2030	2905	28400	1.25	KSF 87 KRF57	AM63
0.51	1760	2586	28800	1.40	KSA 87 KRF57	AD2
0.57	1570	2335	29100	1.60	KSAF 87 KRF57	
0.64	1360	2054	29300	1.85		
0.72	1200	1824	29500	2.10		
0.81	1080	1631	29600	2.30	KS 87 KRF57	Y..63M ₁ -4
					KSF 87 KRF57	AM63
					KSA 87 KRF57	AD3
					KSAF 87 KRF57	
0.94	1240	1404	11900	1.00	KS 77 KRF37	Y..63M ₁ -4
1.10	1090	1245	13200	1.15	KSF 77 KRF37	AM63
					KSA 77 KRF37	AD2
					KSAF 77 KRF37	

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n _i [1/min]	M _i [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P _i =0.18kw						
1.20	1020	1100	13700	1.20	KS 77 KRF37 KSF 77 KRF37 KSA 77 KRF37 KSAF 77 KRF37	Y..63M _i -4 AM63 AD2
1.40	870	954	14500	1.40		
1.60	770	837	15000	1.60		
1.80	640	714	15600	1.95		
2.10	565	637	15800	2.20		
2.30	515	574	16000	2.40		
1.90	600	712	7860	0.95	KS 67 KRF37 KSF 67 KRF37 KSA 67 KRF37 KSAF 67 KRF37	Y..63M _i -4 AM63 AD2
2.20	505	615	8800	1.15		
2.40	450	543	9230	1.25		
2.80	375	469	9720	1.50		
3.10	340	424	9930	1.65		
3.60	305	365	10100	1.85		
3.00	355	438	6520	0.85	KS 57 KRF17 KSF 57 KRF17 KSA 57 KRF17 KSAF 57 KRF17	Y..63M _i -4 AM63 -
3.40	310	388	6970	0.95		
3.90	275	336	7290	1.10		
4.50	235	294	7560	1.25		
4.90	225	269	7650	1.35		
5.80	193	229	7830	1.55		
6.50	174	204	7920	1.75		
7.00	159	187	7990	1.90		
4.50	235	294	4480	0.80	KS 47 KRF17 KSF 47 KRF17 KSA 47 KRF17 KSAF 47 KRF17	Y..63M _i -4 AM63 -
5.10	162	257	5380	1.15		
5.80	190	229	5170	0.95		
6.60	167	200	5300	1.10		
7.00	156	187	5360	1.20		
8.00	138	165	5450	1.35		
9.00	124	148	5520	1.50		
10.0	110	131	5580	1.70		
4.00	250	217.41	10300	2.20	KS 67 KSF 67 KSA 67 KSAF 67	Y..71M _i -6 AM71 AD2
4.60	220	190.11	10400	2.50		
4.80	210	180.60	10400	2.60		
4.30	220	201.00	7670	1.35	KS 57 KSF 57 KSA 57 KSAF 57	Y..71M _i -6 AM71 AD1
4.70	205	184.80	7760	1.45		
5.50	180	158.12	7900	1.65		
6.40	158	137.05	7990	1.85		
6.60	154	201.00	8010	1.90	KS 57 KSF 57 KSA 57 KSAF 57	Y..63M _i -4 AM63 AD1
7.10	143	184.80	8050	2.10		
8.40	125	158.12	8120	2.40		
9.60	110	137.05	8160	2.70		
4.30	210	201.00	5090	0.85	KS 47 KSF 47 KSA 47 KSAF 47	Y..71M _i -6 AM71 AD1
4.70	199	184.80	5180	0.90		
5.50	173	158.12	5320	1.00		
6.40	153	137.05	5420	1.10		
6.80	144	128.10	5460	1.20		
6.60	149	201.00	5440	1.15	KS 47 KSF 47 KSA 47 KSAF 47	Y..63M _i -4 AM63 AD1
7.10	138	184.80	5490	1.25		
8.40	121	158.12	5570	1.40		
9.60	106	137.05	5630	1.60		
10.0	100	128.10	5660	1.65		
12.0	88	110.73	5700	1.90		

n _i [1/min]	M _i [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P _i =0.18kw							
14.0	77	94.08	5750	2.20	KS	47	Y..63M _i -4 AM63 AD1
16.0	69	84.00	5770	2.40	KSF	47	
18.0	60	71.75	5800	2.80	KSA	47	
19.0	69	69.39	5750	2.20	KSAF	47	
8.40	115	157.43	3000	0.80	KS	37	Y..63M _i -4 AM63 AD1
9.10	107	144.40	3000	0.85			
11.0	93	122.94	3000	1.00			
12.0	82	106.00	3000	1.10			
13.0	77	98.80	3000	1.15			
15.0	68	86.36	3000	1.25			
16.0	64	80.96	3000	1.30			
18.0	58	71.44	3000	1.45	KS	37	Y..63M _i -4 AM63 AD1
21.0	52	63.33	3000	1.60			
24.0	55	55.93	3000	1.45			
26.0	51	51.30	3000	1.60			
30.0	44	43.68	3000	1.85			
35.0	38	37.66	3000	2.10			
38.0	36	35.10	3000	2.20			
43.0	32	30.68	3000	2.40			
46.0	30	28.76	3000	2.50			
52.0	26	25.38	3000	2.80			
59.0	24	22.50	3000	3.10			
66.0	22	19.89	3000	2.30			
72.0	21	18.24	2940	2.50			
85.0	18	15.53	2810	2.80			
99.0	15	13.39	2700	3.20	KSF	37	Y..63M _i -4 AM63 AD2
106	14	12.48	2650	3.40	KSA	37	
121	13	10.91	2550	3.80	KSAF	37	
129	12	10.23	2500	4.00			
P _i =0.25kw							
0.45	2930	2905	22200	0.85	KS	87 KRF57	Y..71M _i -4 AM71 AD2
0.50	2560	2586	27400	1.00	KSF	87 KRF57	
0.56	2290	2335	27900	1.10	KSA	87 KRF57	
0.63	1990	2054	28400	1.25	KSAF	87 KRF57	
0.71	1770	1824	28800	1.40	KS	87 KRF57	Y..71M _i -4 AM71 AD3
0.80	1580	1631	29100	1.60			
1.40	930	930	29700	2.70			
1.40	1250	954	11800	1.00	KSF	77 KRF37	Y..71M _i -4 AM71 AD2
1.60	1100	837	13100	1.10	KSA	77 KRF37	
1.80	920	714	14200	1.35	KSAF	77 KRF37	
2.00	820	637	14800	1.50			
2.30	745	574	15200	1.65			
2.60	635	499	15600	1.95			
2.40	650	543	6280	0.85	KS	67 KRF37	Y..71M _i -4 AM71 AD2
2.80	550	469	8390	1.05	KSF	67 KRF37	
3.10	495	424	8880	1.15	KSA	67 KRF37	
3.60	440	365	9320	1.30	KSAF	67 KRF37	
4.10	380	319	9700	1.50			
4.60	335	281	9960	1.70			

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n ₁ [1/min]	M ₁ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=0.25kw						
4.40	340	340	6640	0.85	KS 57 KRF17 KSF 57 KRF17 KSA 57 KRF17 KSAF 57 KRF17	Y..71M ₁ -4 AM71
4.80	320	320	6870	0.95		
5.70	275	275	7280	1.10		
6.40	245	245	7490	1.20		
6.90	225	187	7630	1.30		
7.90	200	165	7780	1.50	KS 67 KSF 67 KSA 67 KSAF 67	Y..71M ₁ -6 AM71 AD2
9.90	162	131	7980	1.85		
4.10	340	217.41	9920	1.65		
4.70	300	190.11	10100	1.85		
5.00	290	180.60	10200	1.90	KS 67 KSF 67 KSA 67 KSAF 67	Y..71M ₁ -4 AM71 AD2
5.60	255	158.45	10300	2.10		
6.00	245	217.41	10300	2.10		
6.80	215	190.11	10400	2.40		
7.20	205	180.60	10500	2.50		
8.20	187	158.45	10500	2.80		
9.70	161	134.40	10600	3.20		
11.0	147	121.33	10600	3.50	KS 57 KSF 57 KSA 57 KSAF 57	Y..71M ₁ -6 AM71 AD1
12.0	131	106.75	10700	4.00		
4.40	300	201.00	7080	1.00		
4.80	275	184.80	7270	1.10		
5.70	240	158.12	7530	1.20		
6.50	210	137.05	7710	1.35	KS 57 KSF 57 KSA 57 KSAF 57	Y..71M ₁ -4 AM71 AD1
7.00	200	128.10	7780	1.45		
6.50	215	201.00	7700	1.35		
7.00	200	184.80	7790	1.45		
8.20	176	158.12	7920	1.70		
9.50	155	137.05	8010	1.90		
10.0	146	128.10	8040	2.00		
12.0	128	110.73	8110	2.30	KS 47 KSF 47 KSA 47 KSAF 47	Y..71M ₁ -4 AM71 AD1
14.0	111	94.08	8160	2.60		
15.0	100	84.00	8190	2.90		
6.50	205	201.00	5120	0.80		
7.00	194	184.80	5210	0.85	KS 37 KSF 37 KSA 37 KSAF 37	Y..71M ₁ -4 AM71 AD1
8.20	170	158.12	5340	1.00		
9.50	150	137.05	5440	1.10		
10.0	141	128.10	5480	1.20		
12.0	124	110.73	5560	1.35		
14.0	108	94.08	5630	1.55		
15.0	98	84.00	5670	1.70		
18.0	85	71.75	5720	1.95		
19.0	97	69.39	5640	1.60		
19.0	80	67.20	5740	2.10		
20.0	90	63.80	5670	1.70		
24.0	78	54.59	5720	2.00		
27.0	68	47.32	5760	2.30		
13.0	108	98.80	3000	0.80	KS 37 KSF 37 KSA 37 KSAF 37	Y..71M ₁ -4 AM71 AD1
15.0	96	86.36	3000	0.90		
16.0	91	80.96	3000	0.95		
18.0	81	71.44	3000	1.05		
21.0	73	63.33	3000	1.10		
23.0	78	55.93	3000	1.05		
25.0	72	51.30	3000	1.15		
30.0	62	43.68	3000	1.30		

n ₁ [1/min]	M ₁ [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =0.25kw							
35.0	54	37.66	3000	1.45	KS	37	Y..71M ₁ -4 AM71 AD1
37.0	51	35.10	3000	1.55	KSF	37	
					KSA	37	
					KSAF	37	
42.0	45	30.68	3000	1.70	KS	37	Y..71M ₁ -4 AM71 AD1
45.0	42	28.76	3000	1.80			
51.0	37	25.38	3000	2.00			
58.0	33	22.50	3000	2.20			
65.0	32	19.89	2870	1.65			
71.0	29	18.24	2820	1.80	KSAF	37	
84.0	25	15.53	2710	2.00			
97.0	22	13.39	2620	2.30	KS	37	Y..71M ₁ -4 AM71 AD2
104	20	12.48	2570	2.40			
119	18	10.91	2480	2.70			
127	17	10.23	2440	2.80			
144	15	9.02	2360	3.10			
162	13	8.00	2280	3.40			
191	191	6.80	2180	3.80			
205	205	6.33	2130	3.30			
241	241	5.38	2030	3.80			
267	267	4.86	1980	4.10			
328	328	3.97	1860	4.80	KSAF	37	
92.0	21	28.76	2740	3.00	KS	37	Y..63M ₁ -2 AM63 AD1
105	19	25.38	2650	3.30	KSF	37	
118	17	22.50	2560	3.40	KSA	37	
134	16	19.89	2410	2.80	KSAF	37	
146	15	18.24	2350	3.00			
171	12	15.53	2250	3.40			
199	11	13.39	2160	3.80	KS	37	Y..63M ₁ -2 AM63 AD2
213	10	12.48	2120	4.00	KSF	37	
					KSA	37	
					KSAF	37	
P ₁ =0.37kw							
0.67	2850	2054	24500	0.90	KS	87 KRF57	Y..71M ₁ -4 AM71 AD2
0.76	2530	1824	27400	1.00	KSF	87 KRF57	
					KSAF	87 KRF57	
0.85	2260	1631	28000	1.10	KS	87 KRF57	Y..71M ₁ -4 AM71 AD3
1.50	1340	930	29400	1.85	KSF	87 KRF57	
1.70	1210	831	29500	2.10	KSA	87 KRF57	
					KSAF	87 KRF57	
1.90	1310	714	11300	0.95	KS	77 KRF37	Y..71M ₁ -4 AM71 AD2
2.20	1160	637	12600	1.05			
2.40	1050	574	13400	1.15			
2.80	900	499	14300	1.35			
3.20	795	438	14900	1.55			
3.60	705	389	15300	1.75	KSAF	77 KRF37	
3.80	620	365	7560	0.90	KS	67 KRF37	Y..71M ₁ -4 AM71 AD2
4.30	540	319	8450	1.05	KSF	67 KRF37	
4.90	475	281	9030	1.20	KSA	67 KRF37	
5.60	430	246	9380	1.30	KSAF	67 KRF37	

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n _i [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P _i =0.37kw						
3.50	635	256.47	15600	2.00	KS 77	Y..80M _i -6
4.00	565	225.26	15800	2.20	KSF 77	AM80
4.20	540	214.00	15900	2.30	KSA 77	AD2
					KSAF 77	
4.20	500	217.41	8830	1.10	KS 67	Y..80M _i -6
4.80	445	190.11	9280	1.25	KSF 67	AM80
5.00	425	180.60	9410	1.30	KSA 67	AD2
5.70	380	158.45	9710	1.45	KSAF 67	
6.40	345	217.41	9900	1.50		
7.30	305	190.11	10100	1.70	KS 67	Y..71M _i -4
7.60	290	180.60	10200	1.75	KSF 67	AM71
8.70	260	158.45	10300	2.00	KSA 67	AD2
10.0	225	134.40	10400	2.30	KSAF 67	
11.0	205	121.33	10500	2.50		
5.70	355	158.12	6510	0.85		
6.60	310	137.05	6950	0.95	KS 57	Y..80M _i -6
7.10	295	128.10	7110	1.00	KSF 57	AM80
8.20	260	110.73	7400	1.15	KSA 57	AD1
9.60	225	94.08	7640	1.30	KSAF 57	
11.0	205	84.00	7770	1.45		
6.90	300	201.00	7050	0.95		
7.50	280	184.80	7230	1.05		
8.70	245	158.12	7510	1.20	KS 57	Y..71M _i -4
10.0	215	137.05	7690	1.35	KSF 57	AM71
11.0	205	128.10	7770	1.45	KSA 57	AD1
12.0	180	110.73	7900	1.65	KSAF 57	
15.0	156	94.08	8000	1.90		
16.0	141	84.00	8060	2.10		
19.0	122	71.75	8130	2.40	KS 57	Y..71M _i -4
20.0	139	69.39	8070	1.75	KSF 57	AM71
21.0	115	67.20	8150	2.50	KSA 57	AD2
22.0	128	63.80	8110	1.90	KSAF 57	
10.0	210	137.05	5110	0.80		
11.0	198	128.10	5180	0.85		
12.0	175	110.73	5320	0.95		
15.0	151	94.08	5430	1.10		
16.0	137	84.00	5500	1.20		
19.0	119	71.75	5580	1.40	KS 47	Y..71M _i -4
20.0	136	69.39	5460	1.15	KSF 47	AM71
21.0	112	67.20	5610	1.50	KSA 47	AD1
22.0	126	63.80	5510	1.25	KSAF 47	
25.0	109	54.59	5590	1.40		
29.0	96	47.32	5410	1.60		
31.0	90	44.22	5330	1.75		
36.0	78	38.23	5140	2.00		
42.0	67	32.48	4930	2.30		
48.0	60	29.00	4790	2.60		
56.0	52	24.77	4590	3.00	KS 47	Y..71M _i -4
59.0	49	23.20	4510	3.10	KSF 47	AM71
68.0	46	20.33	4180	2.40	KSA 47	AD2
78.0	40	17.62	4030	2.80	KSAF 47	
84.0	37	16.47	3960	3.00		

n _i [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P _i =0.37kw						
22.0	103	63.33	3000	0.80		
27.0	101	51.30	3000	0.80		
32.0	87	43.68	3000	0.95		
37.0	76	37.66	3000	1.05		
39.0	71	35.10	3000	1.10		
45.0	62	30.68	3000	1.20	KS 37	Y..71M _i -4
48.0	59	28.76	3000	1.30	KSF 37	AM71
54.0	52	25.38	2940	1.40	KSA 37	AD1
61.0	47	22.50	2870	1.55	KSAF 37	
69.0	44	19.89	2610	1.20		
76.0	41	18.24	2570	1.30		
89.0	35	15.53	2500	1.45		
103	30	13.39	2420	1.60		
111	28	12.48	2390	1.70		
126	25	10.91	2320	1.95		
135	23	10.23	2280	2.00		
153	21	9.02	2220	2.20	KS 37	Y..71M _i -4
172	18	8.00	2150	2.40	KSF 37	AM71
203	16	6.80	2070	2.70	KSA 37	AD2
218	15	6.33	2020	2.40	KSAF 37	
256	12	5.38	1930	2.70		
284	11	4.86	1880	2.90		
348	9.3	3.97	1780	3.40		
104	28	25.38	2540	2.20	KS 37	Y..71M _i -2
118	25	22.50	2460	2.30	KSF 37	AM71
133	24	19.89	2290	1.85	KSA 37	AD1
145	22	18.24	2240	2.00	KSAF 37	
171	19	15.53	2160	2.30		
198	16	13.39	2080	2.60	KS 37	Y..71M _i -2
212	15	12.48	2040	2.70	KSF 37	AM71
243	13	10.91	1970	3.00	KSA 37	AD2
259	12	10.23	1940	3.10	KSAF 37	
294	11	9.02	1870	3.30		
P _i =0.55kw						
1.00	2800	1332	25400	0.90		
1.20	2530	1191	27400	1.00		
1.30	2200	1032	28100	1.15	KS 87 KRF57	Y..80M _i -4
1.50	2030	930	28400	1.25	KSF 87 KRF57	AM80
1.70	1840	831	28700	1.35	KSA 87 KRF57	AD3
1.90	1600	719	29000	1.55	KSAF 87 KRF57	
2.20	1390	624	29300	1.80		
2.50	1260	558	29400	2.00		
3.20	1010	435	29700	2.40		
3.20	1200	438	12300	1.05	KS 77 KRF37	Y..80M _i -4
3.60	1070	389	13300	1.15	KSF 77 KRF37	AM80
4.20	900	327	14400	1.35	KSA 77 KRF37	AD2
4.80	810	289	14800	1.50	KSAF 77 KRF37	
5.50	705	250	15300	1.75		
5.60	645	246	6520	0.90	KS 67 KRF37	Y..80M _i -4
6.20	580	221	8080	1.00	KSF 67 KRF37	AM80
7.00	525	198	8590	1.10	KSA 67 KRF37	AD2
8.20	450	168	9220	1.25	KSAF 67 KRF37	

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n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =0.55kw							
3.20	1110	288.00	29600	2.20	KS	87	Y..80M ₁ -6 AM80 AD2
3.50	1000	258.18	29700	2.40	KSF	87	
4.10	880	222.40	29800	2.70	KSA	87	
4.50	810	202.96	29800	2.90	KSAF	87	
3.60	940	256.47	14200	1.35	KS	77	Y..80M ₁ -6 AM80 AD2
4.10	830	225.26	14700	1.50	KSF	77	
4.30	800	214.00	14900	1.60	KSA	77	
4.80	715	189.09	15300	1.75	KSAF	77	
5.70	620	161.60	15600	2.00			
5.40	650	256.47	15500	1.95	KS	77	Y..80M ₁ -4 AM80 AD2
6.10	580	225.26	15800	2.20	KSF	77	
6.40	550	214.00	15900	2.30	KSA	77	
7.30	495	189.09	16000	2.60	KSAF	77	
6.40	515	217.41	8720	1.00			Y..80M ₁ -4 AM80 AD2
7.30	455	190.11	9190	1.15			
7.60	435	180.60	9340	1.20			
8.70	385	158.45	9650	1.35			
10.0	335	134.40	9950	1.55	KS	67	
11.0	305	121.33	10100	1.70	KSF	67	
13.0	270	106.75	10200	1.90	KSA	67	
14.0	255	100.80	10300	2.00	KSAF	67	
16.0	220	85.83	10400	2.30			
18.0	225	75.06	10400	2.10			
21.0	200	65.63	10500	2.40			
9.70	330	94.08	6760	0.90	KS	57	Y..80M ₁ -6 AM80 AD1
11.0	300	84.00	7070	1.00	KSF	57	
					KSA	57	
					KSAF	57	
13.0	260	71.75	7390	1.10			Y..80M ₁ -6 AM80 AD2
14.0	245	67.20	7500	1.20	KS	57	
17.0	240	54.59	7540	1.10	KSF	57	
19.0	210	47.32	7730	1.30	KSA	57	
21.0	199	44.22	7800	1.35	KSAF	57	
24.0	173	38.23	7930	1.55			
8.70	365	158.12	6390	0.80			Y..80M ₁ -4 AM80 AD1
10.0	320	137.05	6860	0.90	KS	57	
11.0	300	128.10	7040	0.95	KSF	57	
12.0	265	110.73	7350	1.10	KSA	57	
15.0	230	94.08	7600	1.25	KSAF	57	
16.0	205	84.00	7740	1.40			
19.0	182	71.75	7890	1.60			Y..80M ₁ -4 AM80 AD2
21.0	172	67.20	7940	1.65			
25.0	165	54.59	7970	1.50			
29.0	144	47.32	8050	1.70	KS	57	
31.0	135	44.22	8080	1.80	KSF	57	
36.0	118	38.23	8140	2.10	KSA	57	
42.0	101	32.48	7940	2.40	KSAF	57	
48.0	91	29.00	7690	2.70			
56.0	78	24.77	7360	3.10			
59.0	74	23.20	7220	3.30			
68.0	68	20.33	6740	2.50			

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =0.55kw							
16.0	200	84.00	5160	0.80	KS KSF KSA KSAF	47	Y..80M ₁ -4 AM80 AD1
19.0	177	71.75	5310	0.95			
21.0	167	67.20	5360	1.00			
25.0	162	54.59	5120	0.95			
29.0	142	47.32	5000	1.10			
31.0	133	44.22	4940	1.15			
36.0	116	38.23	4800	1.35	KS KSF KSA KSAF	47	Y..80M ₁ -4 AM80 AD2
42.0	100	32.48	4640	1.55			
48.0	90	29.00	4530	1.75			
56.0	77	24.77	4360	2.00			
59.0	73	23.20	4300	2.10			
68.0	68	20.33	3910	1.60			
78.0	59	17.62	3790	1.85			
84.0	56	16.47	3740	2.00			
97.0	48	14.24	3620	2.30			
114	41	12.10	3480	2.60			
128	37	10.80	3390	3.00			
150	32	9.23	3260	3.40			
45.0	93	30.68	2680	0.80	KS KSF KSA KSAF	37	Y..80M ₁ -4 AM80 AD1
48.0	87	28.76	2660	0.85			
54.0	78	25.38	2630	0.95			
61.0	69	22.50	2590	1.05			
89.0	52	15.53	2230	0.95			
103	45	13.39	2190	1.10			
72.0	60	19.13	2530	1.20	KS KSF KSA KSAF	37	Y..80M ₁ -4 AM80 AD2
111	42	12.48	2170	1.15			
126	37	10.91	2130	1.30			
135	35	10.23	2110	1.35			
153	31	9.02	2060	1.50			
172	27	8.00	2010	1.65			
203	23	6.80	1950	1.85			
218	22	6.33	1900	1.60			
256	19	5.38	1830	1.85			
284	17	4.86	1790	1.95			
348	14	3.97	1700	2.30			
98.0	45	28.76	2400	1.45	KS KSF KSA KSAF	37	Y..71M ₁ -2 AM71 AD1
111	40	25.38	2340	1.55			
125	35	22.50	2290	1.60			
141	33	19.89	2090	1.35			
154	30	18.24	2060	1.45			
181	26	15.53	2000	1.60			
210	23	13.39	1930	1.80			
225	21	12.48	1900	1.90			
258	18	10.91	1850	2.10			
275	17	10.23	1820	2.20			
311	15	9.02	1770	2.30			
351	14	8.00	1710	2.60			
413	12	6.80	1640	2.50			
P ₁ =0.75kw							
1.20	4710	1223	23400	0.90	KS	97 KRF57	Y..80M ₁ -4 AM80 AD2
1.30	4130	1070	32200	1.00	KSF	97 KRF57	
1.60	3550	928	34000	1.20	KSA	97 KRF57	
1.70	3140	824	34700	1.35	KSAF	97 KRF57	

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n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =0.75kw							
2.00	2240	714	35900	1.85	KS	97 KRF57	Y..80M ₁ -4 AM80 AD3
2.30	2380	626	35800	1.75	KSF	97 KRF57	
2.70	2040	538	36100	2.00	KSA	97 KRF57	
3.00	1850	484	36300	2.30	KSAF	97 KRF57	
1.40	2940	1032	21700	0.85	KS KSF KSA KSAF	87 KRF57 87 KRF57 87 KRF57 87 KRF57	Y..80M ₁ -4 AM80 AD3
1.50	2710	930	27000	0.90			
1.70	2450	831	27600	1.00			
2.00	2130	719	28200	1.15			
2.30	1860	624	28700	1.35			
2.60	1680	558	28900	1.50			
3.30	1340	435	29300	1.80			
4.40	1030	323	29700	2.30			
4.40	1200	327	12300	1.05	KS	77 KRF37	Y..80M ₁ -4 AM80 AD2
5.00	1080	289	13200	1.15	KSF	77 KRF37	
5.70	930	250	14200	1.30	KSA	77 KRF37	
6.60	820	219	14800	1.50	KSAF	77 KRF37	
3.30	1480	288.00	29200	1.65	KS	87	Y..90S-6 AM90 AD2
3.60	1340	258.18	29400	1.80	KSF	87	
4.20	1170	222.40	29500	2.00	KSA	87	
4.60	1080	202.96	29600	2.20	KSAF	87	
5.00	1010	288.00	29700	2.20	KS	87	Y..80M ₁ -4 AM80 AD2
5.60	910	258.18	29800	2.50	KSF	87	
6.40	800	222.40	29800	2.80	KSA	87	
7.10	735	202.96	29900	3.10	KSAF	87	
4.20	1110	225.26	13000	1.15	KS	77	Y..90S-6 AM90 AD2
4.40	1060	214.00	13400	1.20	KSF	77	
5.00	950	189.09	14100	1.35	KSA	77	
5.80	820	161.60	14800	1.55	KSAF	77	
5.60	850	256.47	14600	1.50	KS KSF KSA KSAF	77 77 77 77	Y..80M ₁ -4 AM80 AD2
6.40	760	225.26	15100	1.65			
6.70	730	214.00	15200	1.75			
7.60	650	189.09	15500	1.95			
8.90	565	161.60	15800	2.20			
9.70	520	148.15	16000	2.40			
11.0	460	130.00	16000	2.60			
12.0	440	123.20	16000	2.70			
13.0	390	107.83	16000	3.00			
7.60	600	190.11	7820	0.85			
8.00	575	180.60	8120	0.90			
9.10	510	158.45	8740	1.00			
11.0	440	134.40	9300	1.15			
12.0	400	121.33	9560	1.30			
13.0	360	106.75	9820	1.45	KS	67	
14.0	340	100.80	9920	1.50	KSF	67	
17.0	295	85.83	10100	1.75	KSA	67	
19.0	300	75.06	10100	1.60	KSAF	67	
22.0	260	65.63	10300	1.80			
23.0	250	62.35	10300	1.90			
26.0	220	54.70	10200	2.20			
31.0	191	46.40	9740	2.50			

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size		Input Configuration		
P ₁ =0.75kw									
13.0	345	71.75	6590	0.85	KS	57	Y..90S-6 AM90 AD2		
14.0	330	67.20	6800	0.90	KSF	57			
17.0	280	56.61	7230	1.05	KSA	57			
20.0	280	47.32	7250	0.95	KSAF	57			
21.0	260	44.22	7380	1.00					
13.0	350	110.73	6550	0.85	KS	57	Y..80M ₁ -4 AM80 AD1		
15.0	305	94.08	7040	0.95	KSF	57			
17.0	275	84.00	7290	1.05	KSA	57			
					KSAF	57			
20.0	235	71.75	7560	1.20	KS KSF KSA KSAF	57 57 57 57	Y..80M ₁ -4 AM80 AD2		
21.0	225	67.20	7640	1.25					
26.0	215	54.59	7700	1.15					
30.0	190	47.32	7850	1.30					
32.0	178	44.22	7910	1.40					
38.0	155	38.23	7910	1.60					
44.0	133	32.48	7590	1.85					
49.0	119	29.00	7380	2.00					
58.0	103	24.77	7080	2.40					
62.0	96	23.20	6950	2.50					
71.0	90	20.33	6420	1.90					
81.0	78	17.62	6200	2.20					
87.0	73	16.47	6100	2.30					
101	64	14.24	5870	2.70					
30.0	187	47.32	4510	0.85	KS	47	Y..80M ₁ -4 AM80 AD1		
32.0	175	44.22	4480	0.90	KSF	47			
					KSA	47			
					KSAF	47			
38.0	153	38.23	4400	1.00	KS KSF KSA KSAF	47 47 47 47	Y..80M ₁ -4 AM80 AD2		
44.0	131	32.48	4290	1.20					
49.0	118	29.00	4200	1.30					
58.0	102	24.77	4080	1.55					
62.0	96	23.20	4030	1.60					
71.0	89	20.33	3590	1.25					
81.0	78	17.62	3510	1.40					
87.0	73	16.47	3470	1.50					
101	63	14.24	3380	1.75					
119	54	12.10	3280	2.00					
133	48	10.80	3200	2.20					
156	42	9.23	3090	2.60				KS KSF KSA KSAF	47 47 47 47
166	39	8.64	3040	2.80					
197	33	7.28	2920	3.10					
224	29	6.40	2810	2.60					
266	25	5.39	2690	3.00					
301	22	4.76	2610	3.30					
359	18	4.00	2490	3.30					
75.0	78	19.13	2260	0.90	KS KSF KSA KSAF	37 37 37 37	Y..80M ₁ -4 AM80 AD2		
115	55	12.48	1930	0.85					
132	48	10.91	1910	1.00					
140	46	10.23	1900	1.05					
159	40	9.02	1880	1.15					
179	36	8.00	1850	1.25					
211	31	6.80	1800	1.40					
227	29	6.33	1760	1.20					

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

n _i [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P_i=0.75kw						
267	24	5.38	1710	1.40	KS 37	Y..80M _i -4
295	22	4.86	1680	1.50	KSF 37	AM80
362	18	3.97	1610	1.75	KSA 37	AD2
					KSAF 37	
151	40	19.13	2060	1.10		
216	30	13.39	1800	1.35		
232	28	12.48	1780	1.45	KS 37	Y..80M _i -2
265	24	10.91	1730	1.60	KSF 37	AM80
283	23	10.23	1710	1.65	KSA 37	AD2
320	20	9.02	1670	1.75	KSAF 37	
361	18	8.00	1630	1.95		
425	16	6.80	1570	1.85		
186	35	15.53	1840	1.20	KS 37	Y..80M _i -2
					KSF 37	AM80
					KSA 37	AD1
					KSAF 37	
P_i=1.10kw						
1.70	4700	824	23500	0.90	KS 97 KRF57	Y..90S-4
					KSF 97 KRF57	AM90
					KSA 97 KRF57	AD2
					KSAF 97 KRF57	
2.00	3360	714	34400	1.25	KS 97 KRF57	Y..90S-4
2.30	3570	626	34000	1.15	KSF 97 KRF57	AM90
2.60	3070	538	34800	1.35	KSA 97 KRF57	AD3
2.90	2780	484	35300	1.50	KSAF 97 KRF57	
3.40	2410	420	35700	1.75		
2.30	2800	624	25500	0.90		
2.60	2530	558	27400	1.00		
2.90	2230	485	28000	1.10		
3.30	2030	435	28400	1.20	KS 87 KRF57	Y..90S-4
3.80	1780	378	28800	1.35	KSF 87 KRF57	AM90
4.40	1550	323	29100	1.55	KSA 87 KRF57	AD3
5.00	1360	281	29300	1.75	KSAF 87 KRF57	
5.60	1450	255	29200	1.35		
6.40	1270	222	29400	1.55		
6.90	1190	205	29500	1.65		
6.50	1230	219	12000	1.00	KS 77 KRF37	Y..90S-4
					KSF 77 KRF37	AM90
					KSA 77 KRF37	AD2
					KSAF 77 KRF37	
3.30	2260	286.40	35900	1.85	KS 97	Y..90L-6
3.60	2080	262.22	36100	2.00	KSF 97	AM90
4.10	1860	231.67	36300	2.20	KSA 97	AD3
					KSAF 97	
3.60	1970	258.18	28500	1.25	KS 87	Y..90L-6
4.20	1720	222.40	28900	1.40	KSF 87	AM90
4.60	1580	202.96	29100	1.50	KSA 87	AD2
					KSAF 87	

n _i [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P_i=1.10kw						
4.90	1490	288.00	29200	1.50		
5.50	1350	258.18	29300	1.70	KS 87	Y..90S-4
6.40	1180	222.40	29500	1.90	KSF 87	AM90
7.00	1080	202.96	29600	2.10	KSA 87	AD2
7.90	970	180.00	29700	2.30	KSAF 87	
9.40	830	151.30	29800	2.60		
6.30	1130	225.26	12900	1.10		
6.60	1080	214.00	13300	1.15		
7.50	960	189.09	14000	1.30		
8.80	830	161.60	14700	1.50	KS 77	Y..90S-4
9.60	775	148.15	15000	1.60	KSF 77	AM90
11.0	685	130.00	15400	1.75	KSA 77	AD2
12.0	655	123.20	15500	1.85	KSAF 77	
13.0	575	107.83	15800	2.00		
15.0	525	97.14	15900	2.20		
17.0	465	85.22	16000	2.40		
12.0	595	121.33	7880	0.85		
13.0	530	106.75	8550	0.95		
14.0	505	100.80	8800	1.05		
17.0	435	85.83	9340	1.20		
18.0	400	78.00	9580	1.30	KS 67	Y..90S-4
22.0	390	65.63	9640	1.20	KSF 67	AM90
23.0	370	62.35	9750	1.30	KSA 67	AD2
26.0	330	54.70	9540	1.45	KSAF 67	
31.0	280	46.40	9210	1.70		
34.0	255	41.89	9010	1.85		
39.0	225	36.85	8750	2.10		
41.0	215	34.80	8630	2.20		
48.0	185	29.63	8300	2.60		
20.0	350	71.75	6530	0.80	KS 57	Y..90S-4
21.0	330	67.20	6750	0.85	KSF 57	AM90
25.0	285	56.61	7210	0.95	KSA 57	AD2
30.0	280	47.32	7250	0.85	KSAF 57	
32.0	260	44.22	7390	0.95		
37.0	225	38.23	7390	1.05		
44.0	197	32.48	7150	1.25		
49.0	177	29.00	6980	1.40		
57.0	152	24.77	6740	1.60		
61.0	143	23.20	6640	1.70	KS 57	Y..90S-4
73.0	121	19.54	6370	1.75	KSF 57	AM90
81.0	116	17.62	5850	1.45	KSA 57	AD2
86.0	108	16.47	5770	1.55	KSAF 57	
100	94	14.24	5590	1.80		
117	80	12.10	5380	2.10		
131	72	10.80	5240	2.40		
154	62	9.23	5040	2.70		
49.0	175	29.00	3720	0.90		
57.0	151	24.77	3660	1.05		
61.0	142	23.20	3640	1.05	KS 47	Y..90S-4
73.0	120	19.54	3560	1.20	KSF 47	AM90
81.0	115	17.62	3070	0.95	KSA 47	AD2
86.0	108	16.47	3060	1.00	KSAF 47	
100	94	14.24	3030	1.15		
117	80	12.10	2980	1.35		

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=1.10kw						
131	72	10.80	2930	1.50		
154	62	9.23	2860	1.75		
164	58	8.64	2830	1.90	KS 47	Y..90S-4
195	49	7.28	2740	2.10	KSF 47	AM90
222	44	6.40	2650	1.75	KSA 47	AD2
263	37	5.39	2560	2.00	KSAF 47	
298	32	4.76	2490	2.20		
355	27	4.00	2390	2.20		
P₁=1.50kw						
178	53	8.00	1580	0.85		
209	45	6.80	1580	0.95	KS 37	Y..90S-4
224	42	6.33	1540	0.80	KSF 37	AM90
264	36	5.38	1520	0.95	KSA 37	AD2
292	33	4.86	1510	1.00	KSAF 37	
358	27	3.97	1470	1.20		
P₁=1.50kw						
214	44	13.39	1580	0.95		
230	41	12.48	1570	0.95	KS 37	Y..80M ₂ -2
263	36	10.91	1560	1.10	KSF 37	AM80
281	34	10.23	1550	1.10	KSA 37	AD2
318	30	9.02	1520	1.20	KSAF 37	
359	27	8.00	1500	1.30		
422	23	6.80	1460	1.25		
P₁=1.50kw						
2.00	4580	714	29300	0.90		
2.30	4870	626	19700	0.85	KS 97	Y..90L-4
2.70	4200	538	31300	1.00	KSF 97	AM90
3.00	3790	484	33600	1.10	KSA 97	AD3
3.40	3300	420	34500	1.25	KSAF 97	
3.80	2980	376	35000	1.40		
4.40	2610	327	35500	1.60		
P₁=1.50kw						
3.00	3050	485	17700	0.80		
3.30	2770	435	26100	0.90	KS 87	Y..90L-4
3.80	2440	378	27600	1.00	KSF 87	AM90
4.40	2120	323	28200	1.15	KSA 87	AD3
5.10	1860	281	28700	1.30	KSAF 87	
5.60	1990	255	28400	1.00		
6.40	1740	222	28800	1.15		
7.00	1620	205	29000	1.20		
P₁=1.50kw						
3.30	3080	286.40	34800	1.35	KS 97	Y..100L-6
3.60	2840	262.22	35200	1.45	KSF 97	AM100
4.10	2540	231.67	35600	1.65	KSA 97	AD3
4.80	2190	196.52	36000	1.90	KSAF 97	
P₁=1.50kw						
5.00	2100	286.40	36100	1.90	KS 97	Y..90L-4
5.40	1940	262.22	36200	2.10	KSF 97	AM90
6.20	1730	231.67	36400	2.30	KSA 97	AD3
7.30	1480	196.52	36600	2.70	KSAF 97	
P₁=1.50kw						
3.60	2680	258.18	27100	0.90	KS 87	Y..100L-6
4.20	2340	222.40	27800	1.00	KSF 87	AM100
4.60	2160	202.96	28200	1.10	KSA 87	AD2
5.20	1930	180.00	28500	1.20	KSAF 87	

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=1.50kw						
5.00	2030	288.00	28400	1.10		
5.50	1830	258.18	28700	1.25		
6.40	1600	222.40	29000	1.40		
7.00	1470	202.96	29200	1.55	KS 87	Y..90L-4
7.90	1320	180.00	29400	1.65	KSF 87	AM90
9.40	1120	151.30	29600	1.90	KSA 87	AD2
10.0	1040	139.05	29700	2.00	KSAF 87	
12.0	930	123.48	29700	2.20		
13.0	840	110.40	29800	2.40		
14.0	760	99.26	29900	2.60		
P₁=1.50kw						
7.60	1310	189.09	11300	0.95		
8.80	1130	161.60	12800	1.10		
9.60	1050	148.15	13500	1.20		
11.0	930	130.00	14200	1.30		
12.0	880	123.20	14500	1.35		
13.0	785	107.83	15000	1.50	KS 77	Y..90L-4
15.0	710	97.14	15300	1.60	KSF 77	AM90
17.0	630	85.22	15400	1.75	KSA 77	AD2
19.0	635	75.09	14100	1.70	KSAF 77	
20.0	605	71.33	14000	1.80		
21.0	500	66.67	14500	2.10		
23.0	540	63.03	13600	2.00		
25.0	430	56.92	14000	2.30		
27.0	465	53.87	13200	2.40		
29.0	425	49.38	12900	2.60		
33.0	375	43.33	12500	2.90		
P₁=1.50kw						
17.0	590	85.83	7940	0.90		
18.0	540	78.00	8460	0.95		
22.0	530	65.63	8570	0.90		
23.0	505	62.35	8800	0.95		
26.0	445	54.70	8790	1.05		
31.0	380	46.40	8570	1.25		
34.0	345	41.89	8420	1.40	KS 67	Y..90L-4
39.0	305	36.85	8230	1.55	KSF 67	AM90
41.0	290	34.80	8140	1.65	KSA 67	AD2
48.0	250	29.63	7880	1.90	KSAF 67	
53.0	225	26.93	7720	2.10		
59.0	215	24.44	6990	1.55		
62.0	205	23.22	6930	1.65		
70.0	184	20.37	6770	1.85		
83.0	157	17.28	6560	2.20		
92.0	142	15.60	6420	2.40		
104	125	13.73	6240	2.70		
P₁=1.50kw						
44.0	265	32.48	6620	0.90		
49.0	235	29.00	6500	1.00		
58.0	205	24.77	6330	1.20		
62.0	194	23.20	6250	1.25	KS 57	Y..90L-4
73.0	164	19.54	6040	1.30	KSF 57	AM90
81.0	157	17.62	5420	1.05	KSA 57	AD2
87.0	147	16.47	5360	1.15	KSAF 57	
100	128	14.24	5240	1.35		
118	109	12.10	5080	1.55		
132	98	10.80	4970	1.75		
155	84	9.23	4800	2.00		

K系列斜齒輪減速電機

K Series Helical Gear Reduction Motor

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=1.50kw						
100	127	14.24	2620	0.85	KS 47	Y..90L-4
118	108	12.10	2620	1.00	KSF 47	AM90
132	97	10.80	2620	1.10	KSA 47	AD2
155	83	9.23	2590	1.30	KSAF 47	
166	78	8.64	2580	1.40		
196	66	7.28	2530	1.55	KS 47	Y..90L-4
223	59	6.40	2450	1.30	KSF 47	AM90
265	50	5.39	2390	1.50	KSA 47	AD2
300	44	4.76	2340	1.65	KSAF 47	
358	37	4.00	2260	1.65		
314	42	9.02	1350	0.85	KS 47	Y..90S-2
354	37	8.00	1350	0.95	KSF 47	AM90
416	32	6.80	1330	0.90	KSA 47	AD2
416	32	6.80	1330	0.90	KSAF 47	
P₁=2.20kw						
3.40	4890	420	19000	0.85	KS 97 KRF57	Y..100L-4
3.80	4410	376	28300	0.95	KSF 97 KRF57	AM100
4.40	3870	327	33400	1.10	KSA 97 KRF57	AD3
5.00	3420	287	34300	1.25	KSAF 97 KRF57	
5.70	2990	252	35000	1.40		
3.30	4460	286.40	31100	0.95	KS 97	Y..112M-6
3.60	4110	262.22	32900	1.00	KSF 97	AM112
4.10	3670	231.67	33800	1.15	KSA 97	AD3
4.90	3160	196.52	34700	1.35	KSAF 97	
5.00	3090	286.40	34800	1.30		
5.40	2850	262.22	35200	1.40		
6.20	2540	231.67	35600	1.55		
7.20	2180	196.52	36000	1.85	KS 97	Y..100L-4
7.90	2020	180.95	36100	1.95	KSF 97	AM100
8.80	1820	161.74	36300	2.10	KSA 97	AD3
9.80	1650	145.60	36500	2.20	KSAF 97	
11.0	1500	131.85	36600	2.40		
12.0	1340	116.92	36700	2.60		
13.0	1220	105.71	36800	2.80		
16.0	1040	89.60	36900	3.10		
5.50	2700	258.18	27000	0.85	KS 87	Y..100L-4
6.40	2360	222.40	27800	0.95	KSF 87	AM100
7.00	2170	202.96	28100	1.05	KSA 87	AD2
7.90	1940	180.00	28500	1.15	KSAF 87	
9.40	1650	151.30	29000	1.30		
10.0	1530	139.05	29100	1.35		
12.0	1370	123.48	29300	1.50		
13.0	1230	110.40	29500	1.60		
14.0	1120	99.26	29600	1.75	KS 87	Y..100L-4
17.0	980	86.15	29700	1.90	KSF 87	AM100
17.0	1050	81.76	29600	1.50	KSA 87	AD2
18.0	880	77.14	29800	2.10	KSAF 87	
20.0	910	70.43	29800	1.75		
22.0	830	64.27	29800	1.90		
25.0	740	57.00	29900	2.20		

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=2.20kw						
11.0	1370	130.00	7440	0.90		
12.0	1300	123.20	11300	0.90		
13.0	1150	107.83	12700	1.00		
15.0	1040	97.14	13500	1.10		
17.0	920	85.22	14100	1.20	KS 77	Y..100L-4
19.0	820	75.20	13800	1.30	KSF 77	AM100
21.0	735	66.67	13500	1.40	KSA 77	AD2
23.0	795	63.03	12400	1.40	KSAF 77	
25.0	635	56.92	13100	1.55		
26.0	685	53.87	12100	1.60		
29.0	630	49.38	11900	1.75		
33.0	555	43.33	11700	2.00		
35.0	525	41.07	11500	2.10		
40.0	460	35.94	11300	2.40	KS 77	Y..100L-4
44.0	420	32.38	11000	2.60	KSF 77	AM100
50.0	370	28.41	10700	2.80	KSA 77	AD3
57.0	325	25.07	10400	3.10	KSAF 77	
62.0	305	22.89	9470	2.30		
68.0	280	20.99	9320	2.50		
31.0	560	46.40	7470	0.85	KS 67	Y..100L-4
34.0	510	41.89	7430	0.95	KSF 67	AM100
39.0	450	36.85	7350	1.05	KSA 67	AD2
41.0	425	34.80	7310	1.10	KSAF 67	
48.0	365	29.63	7170	1.30		
53.0	335	26.93	7070	1.45		
61.0	290	23.33	6910	1.65	KS 67	Y..100L-4
70.0	270	20.37	6060	1.25	KSF 67	AM100
82.0	230	17.28	5950	1.50	KSA 67	AD2
91.0	205	15.60	5870	1.65	KSAF 67	
104	184	13.73	5760	1.85		
110	174	12.96	5700	1.95		
129	149	11.03	5540	2.30	KS 67	Y..100L-4
142	136	10.03	5440	2.50	KSF 67	AM100
164	118	8.69	5280	2.80	KSA 67	AD3
164	118	8.69	5280	2.80	KSAF 67	
100	188	14.24	4640	0.90		
118	160	12.10	4570	1.05		
132	144	10.80	4520	1.20		
154	123	9.23	4420	1.35	KS 57	Y..100L-4
165	116	8.64	4370	1.45	KSF 57	AM100
196	98	7.28	4240	1.50	KSA 57	AD2
223	87	6.40	4090	1.15	KSAF 57	
264	73	5.39	3960	1.30		
299	65	4.76	3850	1.45		
356	55	4.00	3710	1.60		
P₁=3.00kw						
5.10	4580	287	25700	0.90	KS 97 KRF57	Y..100L-4
5.80	4020	252	33100	1.05	KSF 97 KRF57	AM100
6.60	3510	219	34100	1.20	KSA 97 KRF57	AD3
7.10	3300	205	34500	1.25	KSAF 97 KRF57	

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n ₁ [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P ₁ =3.00kw						
5.10	4140	286.40	32900	0.95	KS 97 KSF 97 KSA 97 KSAF 97	Y..100L-4 AM100 AD3
5.60	3820	262.22	33600	1.05		
6.30	3410	231.67	34300	1.15		
7.40	2920	196.52	35100	1.35		
8.00	2710	180.95	35400	1.45		
9.00	2440	161.74	35700	1.55		
10.0	2210	145.60	36000	1.70		
11.0	2010	131.85	36200	1.80	KS 97 KSF 97 KSA 97 KSAF 97	Y..100L-4 AM100 AD3
12.0	1800	116.92	36300	1.95		
14.0	1630	105.71	36500	2.10		
16.0	1390	89.60	36700	2.30		
18.0	1410	80.85	36600	2.30		
8.10	2600	180.00	27300	0.85	KS 87 KSF 87 KSA 87 KSAF 87	Y..100L-4 AM100 AD2
9.60	2210	151.30	28100	0.95		
10.0	2050	139.05	28400	1.00		
12.0	1830	123.48	28700	1.10		
13.0	1650	110.40	29000	1.20		
15.0	1490	99.26	29200	1.30		
17.0	1310	86.15	29400	1.45		
18.0	1400	81.76	29300	1.15		
19.0	1180	77.14	29500	1.55		
21.0	1210	70.43	29500	1.30		
23.0	1110	64.27	29600	1.45		
26.0	990	57.00	29700	1.60		
30.0	830	47.91	29800	1.90	KS 87 KSF 87 KSA 87 KSAF 87	Y..100L-4 AM100 AD3
33.0	770	44.03	29900	2.10		
37.0	685	39.10	29900	2.30		
42.0	615	34.96	29900	2.60		
17.0	1240	85.22	11900	0.90	KS 77 KSF 77 KSA 77 KSAF 77	Y..100L-4 AM100 AD2
19.0	1100	75.20	12500	0.95		
22.0	980	66.67	12300	1.05		
23.0	1060	63.03	10900	1.05		
26.0	850	56.92	12000	1.15		
27.0	910	53.87	10800	1.20		
29.0	840	49.38	10800	1.30		
34.0	740	43.33	10600	1.50		
35.0	705	41.07	10600	1.55		
40.0	620	35.94	10400	1.75		
45.0	560	32.38	10200	1.95		
51.0	490	28.41	10000	2.10		
58.0	435	25.07	9770	2.30	KS 77 KSF 77 KSA 77 KSAF 77	Y..100L-4 AM100 AD3
64.0	410	22.89	8640	1.70		
69.0	375	20.99	8550	1.85		
79.0	330	18.42	8400	2.10		
83.0	315	17.45	8340	2.20		
95.0	275	15.28	8160	2.60		
106	250	13.76	8010	2.80		
121	220	12.07	7810	3.30		
137	195	10.65	7610	3.70		
42.0	570	34.80	6350	0.85	KS 67 KSF 67 KSA 67 KSAF 67	Y..100L-4 AM100 AD2
49.0	490	29.63	6340	1.00		
54.0	445	26.93	6320	1.05		
62.0	390	23.33	6250	1.25		

n ₁ [1/min]	M _L [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =3,00kw							
71.0	360	20.37	5240	0.95	KS KSF KSA KSAF	67	Y..100L-4 AM100 AD2
84.0	305	17.28	5250	1.10			
93.0	275	15.60	5230	1.20			
106	245	13.73	5190	1.40			
112	230	12.96	5170	1.45			
132	199	11.03	5080	1.70	KS	67	Y..100L-4 AM100 AD3
145	181	10.03	5020	1.90	KSF	67	
167	157	8.69	4910	2.10	KSA	67	
192	137	7.56	4800	2.20	KSAF	67	
135	192	10.80	3990	0.90	KS KSF KSA KSAF	57	Y..100L-4 AM100 AD2
158	164	9.23	3960	1.05			
168	154	8.64	3950	1.10			
200	130	7.28	3880	1.10			
227	116	6.40	3760	0.85			
270	98	5.39	3670	0.95			
306	87	4.76	3600	1.05			
364	73	4.00	3480	1.20			
P ₁ =4,00kw							
6.70	4690	219	24100	0.90	KS	97 KRF57	Y..112M-4 AM112 AD3
7.10	4410	205	28500	0.95	KSF	97 KRF57	
					KSA	97 KRF57	
					KSAF	97 KRF57	
6.30	4530	231.67	30200	0.90	KS KSF KSA KSAF	97	Y..112M-4 AM112 AD3
7.40	3890	196.52	33400	1.05			
8.10	3600	180.95	34000	1.10			
9.00	3240	161.74	34600	1.20			
10.0	2940	145.60	35000	1.25			
11.0	2680	131.85	35400	1.35			
12.0	2390	116.92	35800	1.45			
14.0	2170	105.71	36000	1.60			
16.0	1850	89.60	36300	1.75			
18.0	1880	80.85	36300	1.70			
20.0	1670	71.43	36400	1.95	KS	97	Y..112M-4 AM112 AD4
24.0	1420	60.59	36600	2.30	KSF	97	
26.0	1310	55.79	36700	2.50	KSA	97	
					KSAF	97	
12.0	2440	123.48	27600	0.85	KS KSF KSA KSAF	87	Y..112M-4 AM112 AD2
13.0	2200	110.40	28100	0.90			
15.0	1990	99.26	28500	1.00			
17.0	1740	86.15	28800	1.10			
19.0	1570	77.14	29100	1.15			
21.0	1610	70.43	29000	1.00			
23.0	1480	64.27	29200	1.10			
26.0	1310	57.00	29400	1.20			
30.0	1110	47.91	29600	1.45			
33.0	1020	44.03	29700	1.55	KSF	87	
37.0	910	39.10	29700	1.75	KSA	87	
42.0	820	34.96	29700	1.95	KSAF	87	
46.0	740	31.43	28900	2.20			
54.0	645	27.28	28000	2.50			

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n ₁ [1/min]	M ₁ [Nm]	i	Fr [N]	K	Frame size		Input Configuration	
P ₁ =4.00kw								
57.0	615	25.50	26400	2.00	KS KSF KSA KSAF	87 87 87 87	Y..112M-4 AM112 AD4	
26.0	1130	56.92	10800	0.85	KS	77	Y..112M-4 AM112 AD2	
27.0	1210	53.87	9280	0.90	KSF	77		
30.0	1120	49.38	9330	1.00	KSA	77		
34.0	980	43.33	9370	1.10	KSAF	77		
36.0	930	41.07	9370	1.15				
41.0	820	35.94	9330	1.35				
45.0	745	32.38	9270	1.45				
51.0	655	28.41	9160	1.60				
58.0	580	25.07	9040	1.75				
64.0	545	22.89	7650	1.30	KS	77		
70.0	500	20.99	7640	1.40	KSF	77	Y..112M-4 AM112 AD3	
79.0	440	18.42	7600	1.60	KSA	77		
84.0	420	17.45	7580	1.70	KSAF	77		
96.0	365	15.28	7490	1.90				
106	330	13.76	7400	2.10				
121	290	12.07	7280	2.40				
137	255	10.65	7140	2.80	KS	77		Y..112M-4 AM112 AD4
155	230	9.44	6990	3.20	KSF	77		
181	197	8.06	6790	3.40	KSA	77		
					KSAF	77		
84.0	405	17.28	3910	0.85	KS	67	Y..112M-4 AM112 AD2	
94.0	370	15.60	4270	0.90	KSF	67		
106	325	13.73	4510	1.05	KSA	67		
113	305	12.96	4520	1.10	KSAF	67		
132	260	11.03	4530	1.30	KS	67	Y..112M-4 AM112 AD3	
146	240	10.03	4520	1.40	KSF	67		
168	205	8.69	4480	1.60	KSA	67		
193	182	7.56	4420	1.60	KSAF	67		
P ₁ =5.50kw								
9.00	4470	161.74	31000	0.85			Y..132S-4 AM132 AD3	
10.0	4050	145.60	33100	0.90				
11.0	3690	131.85	33800	1.00	KS	97		
12.0	3300	116.92	34500	1.05	KSF	97		
14.0	3000	105.71	35000	1.15	KSA	97		
16.0	2560	89.60	35500	1.25	KSAF	97		
19.0	2250	78.26	35900	1.35				
22.0	1900	65.45	36300	1.55				
20.0	2300	71.43	35800	1.45			Y..132S-4 AM132 AD4	
24.0	1960	60.59	36200	1.70	KS	97		
26.0	1810	55.79	36300	1.80	KSF	97		
29.0	1620	49.87	36500	2.00	KSA	97		
32.0	1470	44.89	36600	2.20	KSAF	97		
36.0	1330	40.65	36700	2.50				
19.0	2160	77.14	28200	0.85	KS	87	Y..132S-4 AM132 AD2	
26.0	1810	57.00	28700	0.90	KSF	87		
30.0	1530	47.91	29100	1.05	KSA	87		
					KSAF	87		

n ₁ [1/min]	M ₁ [Nm]	i	Fr [N]	K	Frame size		Input Configuration
P ₁ =5.50kw							
23.0	1810	64.00	28700	0.95	KS KSF KSA KSAF	87 87 87 87	Y..132S-4 AM132 AD3
33.0	1410	44.03	29200	1.15			
37.0	1260	39.10	29100	1.25			
42.0	1130	34.96	28500	1.40			
46.0	1020	31.43	27900	1.55			
53.0	890	27.28	27100	1.80			
57.0	850	25.50	25200	1.45	KS KSF KSA KSAF	87 87 87 87	Y..132S-4 AM132 AD4
68.0	715	21.43	24400	1.70			
74.0	660	19.70	24000	1.85			
83.0	585	17.49	23400	2.10			
93.0	525	15.64	22900	2.40			
103	475	14.06	22400	2.60			
119	410	12.21	21700	3.00			
133	370	10.93	21100	3.30			
35.0	1290	41.07	7590	0.85	KS KSF KSA KSAF	77 77 77 77	Y..132S-4 AM132 AD2
40.0	1130	35.94	7770	0.95	KS KSF KSA KSAF	77 77 77 77	Y..132S-4 AM132 AD3
45.0	1020	32.38	7860	1.05			
51.0	900	28.41	7920	1.15			
58.0	800	25.07	7940	1.25			
65.0	710	22.22	7920	1.35			
79.0	610	18.42	6000	1.15			
83.0	580	17.45	6240	1.20			
95.0	505	15.28	6500	1.40			
106	460	13.76	6510	1.55			
121	400	12.07	6490	1.80			
137	355	10.65	6440	2.00			
154	315	9.44	6380	2.30			
180	270	8.06	6260	2.50			
132	360	11.03	2990	0.95	KS	67	Y..132S-4 AM132 AD3
145	330	10.03	3310	1.00	KSF	67	
167	285	8.69	3720	1.15	KSA	67	
192	250	7.56	3850	1.15	KSAF	67	
P ₁ =7.50kw							
14.0	4050	105.71	33100	0.85	KS	97	Y..132M-4 AM132 AD3
16.0	3460	89.60	34200	0.95	KSF	97	
19.0	3040	78.26	34900	1.00	KSA	97	
22.0	2560	65.45	35500	1.15	KSAF	97	
21.0	3110	71.43	34800	1.05	KS KSF KSA KSAF	97 97 97 97	Y..132M-4 AM132 AD4
24.0	2650	60.59	35400	1.25			
26.0	2450	55.79	35700	1.35			
29.0	2190	49.87	36000	1.50			
33.0	1980	44.89	36200	1.65			
36.0	1800	40.65	36300	1.85			
41.0	1600	36.05	36000	2.10			
45.0	1450	32.60	35300	2.20			
56.0	1200	26.39	31900	2.20			
62.0	1080	23.59	31200	2.40	KS	97	Y..132M-4 AM132 AD5
69.0	970	21.23	30600	2.70	KSF	97	
76.0	880	19.23	30000	2.90	KSA	97	
					KSAF	97	

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n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=7.50kw						
33.0	1910	44.03	27700	0.85	KS 87	Y..132M-4
38.0	1700	39.10	27300	0.95	KSF 87	AM132
42.0	1520	34.96	26900	1.05	KSA 87	AD3
47.0	1370	31.43	26400	1.15	KSAF 87	
54.0	1200	27.28	25800	1.35		
P₁=11.0kw						
58.0	1150	25.50	23400	1.10	KS 87	Y..132M-4
69.0	970	21.43	22900	1.30	KSF 87	AM132
75.0	890	19.70	22600	1.40	KSA 87	AD4
84.0	795	17.49	22200	1.55	KSAF 87	
94.0	710	15.64	21800	1.75		
105	640	14.06	21400	1.95		
120	555	12.21	20800	2.20		
135	500	10.93	20400	2.50		
162	415	9.07	19600	2.70		
186	360	7.88	19000	2.80		
P₁=15.0kw						
52.0	1220	28.41	6290	0.85	KS 77	Y..132M-4
59.0	1080	25.07	6490	0.95	KSF 77	AM132
66.0	960	22.22	6620	1.00	KSA 77	AD3
80.0	820	18.42	2080	0.85	KSAF 77	
84.0	780	17.45	2500	0.90		
96.0	685	15.28	3420	1.05		
107	620	13.76	4040	1.15		
122	545	12.07	4690	1.30		
P₁=18.5kw						
138	480	10.65	5210	1.50	KS 77	Y..132M-4
156	425	9.44	5560	1.70	KSF 77	AM132
182	365	8.06	5560	1.85	KSA 77	AD4
					KSAF 77	
P₁=22.0kw						
26.0	3580	55.79	34000	0.90	KS 97	Y..160M-4
30.0	3210	49.87	34600	1.05	KSF 97	AM160
33.0	2900	44.89	34700	1.15	KSA 97	AD4
36.0	2630	40.65	34200	1.25	KSAF 97	
41.0	2340	36.05	33700	1.40		
45.0	2120	32.60	33100	1.50		
56.0	1760	26.39	29300	1.45		
P₁=28.0kw						
63.0	1580	23.59	28900	1.65	KS 97	Y..160M-4
69.0	1420	21.23	28500	1.80	KSF 97	AM160
77.0	1290	19.23	28100	2.00	KSA 97	AD5
86.0	1140	17.05	27500	2.20	KSAF 97	
96.0	1040	15.42	27100	2.40		
113	880	13.07	26200	2.60		
129	770	11.41	25500	2.90		
P₁=37.0kw						
54.0	1750	27.28	23600	0.90	KS 87	Y..160M-4
					KSF 87	AM160
					KSA 87	AD3
					KSAF 87	
P₁=45.0kw						
60.0	1570	24.43	23300	1.00	KS 87	Y..160M-4
73.0	1310	20.27	22700	1.20	KSF 87	AM160
75.0	1300	19.70	20300	0.95	KSA 87	AD4
84.0	1160	17.49	20200	1.05	KSAF 87	
94.0	1040	15.64	20000	1.20		
105	930	14.06	19700	1.30		

n ₁ [1/min]	M ₂ [Nm]	i	Fr [N]	K	Frame size	Input Configuration
P₁=11.0kw						
121	810	12.21	19400	1.50	KS 87	Y..160M-4
135	730	10.93	19100	1.70	KSF 87	AM160
163	605	9.07	18500	1.85	KSA 87	AD4
187	530	7.88	18000	1.90	KSAF 87	
P₁=15.0kw						
33.0	3980	44.89	31400	0.85	KS 97	Y..160L-4
36.0	3610	40.65	31300	0.90	KSF 97	AM160
41.0	3210	36.05	31000	1.05	KSA 97	AD4
45.0	2910	32.60	30700	1.10	KSAF 97	
56.0	2420	26.39	26400	1.05		
P₁=18.5kw						
62.0	2170	23.59	26300	1.20	KS 97	Y..160L-4
69.0	1950	21.23	26200	1.35	KSF 97	AM160
76.0	1770	19.23	26000	1.45	KSA 97	AD5
86.0	1570	17.05	25700	1.65	KSAF 97	
95.0	1420	15.42	25400	1.75		
112	1210	13.07	24800	1.90		
128	1060	11.41	24300	2.10		
153	880	9.55	23600	2.30		
177	770	8.26	22900	2.30		
P₁=22.0kw						
94.0	1430	15.64	16800	0.85	KS 87	Y..160L-4
104	1280	14.06	17900	0.95	KSF 87	AM160
120	1120	12.21	17800	1.10	KSA 87	AD4
134	1000	10.93	17600	1.25	KSAF 87	
162	830	9.07	17300	1.35		
186	725	7.88	17000	1.40		
P₁=28.0kw						
41.0	3960	36.05	28700	0.85	KS 97	Y..180M-4
45.0	3590	32.60	28600	0.90	KSF 97	AM180
					KSA 97	AD4
					KSAF 97	
P₁=37.0kw						
53.0	3050	27.63	28400	1.00	KS 97	Y..180M-4
61.0	2670	24.13	28100	1.05	KSF 97	AM180
69.0	2410	21.23	24100	1.10	KSA 97	AD5
76.0	2190	19.23	24100	1.20	KSAF 97	
86.0	1940	17.05	24000	1.30		
95.0	1760	15.42	23900	1.40		
112	1490	13.07	23500	1.55		
128	1300	11.41	23200	1.70		
153	1090	9.55	22600	1.85		
177	950	8.26	22100	1.85		
P₁=45.0kw						
53.0	3610	27.63	26600	0.85	KS 97	Y..180L-4
61.0	3160	24.13	26500	0.90	KSF 97	AM180
69.0	2850	21.23	18600	0.90	KSA 97	AD5
77.0	2580	19.23	20500	1.00	KSAF 97	
86.0	2290	17.05	22300	1.10		
96.0	2080	15.42	22400	1.20		
113	1760	13.07	22300	1.30		
129	1540	11.41	22100	1.45		
155	1290	9.55	21700	1.60		
178	1120	8.26	21300	1.60		

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5.8 KS../KRF..性能参数 / KS../KRF.. Performance Parameters

n: [1/min]	i	Fr [N]	Frame size		Motor
M _{max} =92Nm					
0.14	10037	3000			
0.16	8654	3000			
0.17	8066	3000			
0.20	7051	3000			
0.23	6079	3000			
0.25	5431	3000			
0.29	4747	3000			
0.33	4155	3000			
0.38	3632	3000	KS	37 KRF17	Y..63M ₁ -4
0.48	2866	3000	KSF	37 KRF17	Y..63M ₁ -4
0.56	2471	3000	KSA	37 KRF17	Y..63M ₁ -4
0.64	2160	3000	KSAF	37 KRF17	Y..63M ₁ -4
0.73	1887	3000			
0.83	1665	3000			
0.95	1456	3000			
1.10	1271	3000			
1.20	1121	3000			
1.40	994	3000			
1.60	869	3000			
1.80	774	3000			
2.10	666	3000			
2.30	596	3000			
2.60	521	3000			
3.00	456	3000	KS	37 KRF17	Y..63M ₁ -4
3.50	398	3000	KSF	37 KRF17	Y..63M ₁ -4
3.90	351	3000	KSA	37 KRF17	Y..63M ₁ -4
4.60	303	3000	KSAF	37 KRF17	Y..63M ₁ -4
5.20	265	3000			
6.00	232	3000			
6.80	202	3000			
7.40	179	3000	KS	37 KRF17	Y..63M ₁ -4
8.30	158	3000	KSF	37 KRF17	Y..63M ₁ -4
9.10	144	3000	KSA	37 KRF17	Y..63M ₁ -4
11.0	118	3000	KSAF	37 KRF17	Y..63M ₁ -4
12.0	110	3000			
M _{max} =185Nm					
0.11	12909	5250			
0.12	11189	5250			
0.13	10374	5250			
0.15	8992	5250			
0.18	7860	5250			
0.20	6887	5250			
0.23	6055	5250			
0.26	5292	5250	KS	47 KRF17	Y..63M ₁ -4
0.30	4637	5250	KSF	47 KRF17	Y..63M ₁ -4
0.34	4092	5250	KSA	47 KRF17	Y..63M ₁ -4
0.39	3582	5200	KSAF	47 KRF17	Y..63M ₁ -4
0.44	3131	5200			
0.51	2714	5200			
0.57	2412	5200			
0.65	2131	5200			
0.74	1863	5200			
0.83	1663	5200			
0.96	1435	5200			

n_2 [1/min]	i	Fr [N]	Frame size		Motor
M _{max} =185Nm					
1.10	1254	5200			
1.20	1120	5200			
1.30	1083	5200			
1.40	965	5200			
1.60	865	5200	KS	47 KRF17	Y..63M ₁ -4
1.80	750	5200	KSF	47 KRF17	Y..63M ₁ -4
2.10	655	5200	KSA	47 KRF17	Y..63M ₁ -4
2.40	574	5200	KSAF	47 KRF17	Y..63M ₁ -4
2.70	506	5200			
3.20	438	5200			
3.60	388	5200			
3.90	336	5200	KS	47 KRF17	Y..63M ₁ -4
4.50	294	5200	KSF	47 KRF17	Y..63M ₁ -4
5.80	229	5200	KSA	47 KRF17	Y..63M ₁ -4
			KSAF	47 KRF17	Y..63M ₁ -4
5.00	257	5260	KS	47 KRF17	Y..71M ₁ -4
6.50	200	5200	KSF	47 KRF17	Y..71M ₁ -4
6.90	187	5200	KSA	47 KRF17	Y..71M ₁ -4
7.90	165	5200	KSAF	47 KRF17	Y..71M ₁ -4
9.40	148	5200	KS	47 KRF17	Y..71M ₁ -4
11.0	131	5200	KSF	47 KRF17	Y..71M ₁ -4
			KSA	47 KRF17	Y..71M ₁ -4
			KSAF	47 KRF17	Y..71M ₁ -4
M _{max} =330Nm					
0.11	12909	6800			
0.12	11189	6800			
0.13	10374	6800			
0.15	8992	6800			
0.18	7860	6800	KS	57 KRF17	Y..63M ₁ -4
0.20	6887	6800	KSF	57 KRF17	Y..63M ₁ -4
0.23	6055	6800	KSA	57 KRF17	Y..63M ₁ -4
0.26	5292	6800	KSAF	57 KRF17	Y..63M ₁ -4
0.30	4637	6800			
0.34	4092	6800			
0.38	3628	6800			
M _{max} =300Nm					
0.44	3131	7080			
0.51	2714	7080			
0.57	2412	7080			
0.65	2131	7080			
0.74	1863	7080			
0.83	1663	7080	KS	57 KRF17	Y..63M ₁ -4
0.96	1435	7080	KSF	57 KRF17	Y..63M ₁ -4
1.10	1254	7080	KSA	57 KRF17	Y..63M ₁ -4
1.30	1083	7080	KSAF	57 KRF17	Y..63M ₁ -4
1.40	965	7080			
1.60	865	7080			
1.80	750	7080			
2.10	655	7080			

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

n ₂ [1/min]	i	Fr [N]	Frame size		Motor
M _{max} =300Nm					
2.30	574	7080	KS	57 KRF17	Y..63M ₁ -4
2.60	506	7080	KSF	57 KRF17	Y..63M ₁ -4
3.00	438	7080	KSA	57 KRF17	Y..63M ₁ -4
3.40	388	7080	KSAF	57 KRF17	Y..63M ₁ -4
3.90	336	7080	KS	57 KRF17	Y..71M ₁ -4
4.40	294	7080	KSF	57 KRF17	Y..71M ₁ -4
4.80	269	7080	KSA	57 KRF17	Y..71M ₁ -4
			KSAF	57 KRF17	Y..71M ₁ -4
6.00	229	7080	KS	57 KRF17	Y..71M ₁ -4
6.80	204	7080	KSF	57 KRF17	Y..71M ₁ -4
7.40	187	7080	KSA	57 KRF17	Y..71M ₁ -4
			KSAF	57 KRF17	Y..71M ₁ -4
8.40	165	7080	KS	57 KRF17	Y..80M ₁ -4
11.0	131	7080	KSF	57 KRF17	Y..80M ₁ -4
			KSA	57 KRF17	Y..80M ₁ -4
			KSAF	57 KRF17	Y..80M ₁ -4
M _{max} =570Nm					
0.06	21362	8190			
0.07	19594	8190			
0.08	18120	8190			
0.08	16682	8190			
0.10	14383	8190			
0.11	12774	8190			
0.13	11013	8190			
0.14	9694	8190			
0.16	8529	8190			
0.19	7455	8190			
0.21	6531	8190	KS	67 KRF37	Y..63M ₁ -4
0.24	5759	8190	KSF	67 KRF37	Y..63M ₁ -4
0.28	4965	8190	KSA	67 KRF37	Y..63M ₁ -4
0.31	4410	8190	KSAF	67 KRF37	Y..63M ₁ -4
0.36	3880	8190			
0.40	3432	8190			
0.47	2944	8190			
0.52	2630	8190			
0.61	2279	8190			
0.69	2014	8190			
0.78	1772	8190			
0.88	1559	8190			
1.00	1363	8190			
1.20	1194	8190			
1.30	1045	8190	KS	67 KRF37	Y..63M ₁ -4
1.40	914	8190	KSF	67 KRF37	Y..63M ₁ -4
1.60	809	8190	KSA	67 KRF37	Y..63M ₁ -4
1.90	712	8190	KSAF	67 KRF37	Y..63M ₁ -4
2.10	615	8190	KS	67 KRF37	Y..71M ₁ -4
2.40	543	8190	KSF	67 KRF37	Y..71M ₁ -4
			KSA	67 KRF37	Y..71M ₁ -4
			KSAF	67 KRF37	Y..71M ₁ -4

n ₂ [1/min]	i	Fr [N]	Frame size		Motor
M _{max} =570Nm					
2.90	469	8190	KS	67 KRF37	Y..71M ₁ -4
3.30	424	8190	KSF	67 KRF37	Y..71M ₁ -4
3.80	365	8190	KSA	67 KRF37	Y..71M ₁ -4
			KSAF	67 KRF37	Y..71M ₁ -4
4.30	319	8190	KS	67 KRF37	Y..80M ₁ -4
4.90	281	8190	KSF	67 KRF37	Y..80M ₁ -4
5.60	246	8190	KSA	67 KRF37	Y..80M ₁ -4
6.20	221	8190	KSAF	67 KRF37	Y..80M ₁ -4
7.30	198	8190	KS	67 KRF37	Y..80M ₁ -4
			KSF	67 KRF37	Y..80M ₁ -4
			KSA	67 KRF37	Y..80M ₁ -4
			KSAF	67 KRF37	Y..80M ₁ -4
M _{max} =1270Nm					
0.05	25493	11700			
0.06	21787	11700			
0.07	19907	11700			
0.08	17013	11700			
0.09	14668	11700			
0.11	13110	11700			
0.12	11569	11700	KS	77 KRF37	Y..63M ₁ -4
0.14	9887	11700	KSF	77 KRF37	Y..63M ₁ -4
0.16	8817	11700	KSA	77 KRF37	Y..63M ₁ -4
0.18	7735	11700	KSAF	77 KRF37	Y..63M ₁ -4
0.20	6735	11700			
0.23	5943	11700			
0.26	5214	11700			
0.30	4618	11700			
0.35	3992	11700			
0.39	3540	11700			
0.43	3098	11700	KS	77 KRF37	Y..63M ₁ -4
			KSF	77 KRF37	Y..63M ₁ -4
			KSA	77 KRF37	Y..63M ₁ -4
			KSAF	77 KRF37	Y..63M ₁ -4
M _{max} =1240Nm					
0.50	2753	12000	KS	77 KRF37	Y..63M ₁ -4
0.58	2374	12000	KSF	77 KRF37	Y..63M ₁ -4
			KSA	77 KRF37	Y..63M ₁ -4
			KSAF	77 KRF37	Y..63M ₁ -4
0.63	2083	12000	KS	77 KRF37	Y..63M ₁ -4
0.73	1813	12000	KSF	77 KRF37	Y..63M ₁ -4
0.76	1745	12000	KSA	77 KRF37	Y..63M ₁ -4
0.82	1600	12000	KSAF	77 KRF37	Y..63M ₁ -4
0.94	1404	12000			
1.00	1245	12000	KS	77 KRF37	Y..71M ₁ -4
1.20	1100	12000	KSF	77 KRF37	Y..71M ₁ -4
1.40	954	12000	KSA	77 KRF37	Y..71M ₁ -4
			KSAF	77 KRF37	Y..71M ₁ -4

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

n_2 [1/min]	i	F_r [N]	Frame size		Motor
$M_{max}=1240Nm$					
1.60	837	12000	KS	77 KRF37	Y..71M ₂ -4
1.90	714	12000	KSF	77 KRF37	Y..71M ₂ -4
			KSA	77 KRF37	Y..71M ₂ -4
			KSAF	77 KRF37	Y..71M ₂ -4
2.20	637	12000	KS	77 KRF37	Y..80M ₁ -4
2.40	574	12000	KSF	77 KRF37	Y..80M ₁ -4
2.80	499	12000	KSA	77 KRF37	Y..80M ₁ -4
			KSAF	77 KRF37	Y..80M ₁ -4
3.30	438	12000	KS	77 KRF37	Y..80M ₂ -4
3.70	389	12000	KSF	77 KRF37	Y..80M ₂ -4
			KSA	77 KRF37	Y..80M ₂ -4
			KSAF	77 KRF37	Y..80M ₂ -4
4.30	327	12000	KS	77 KRF37	Y..90S-4
4.90	289	12000	KSF	77 KRF37	Y..90S-4
5.70	250	12000	KSA	77 KRF37	Y..90S-4
			KSAF	77 KRF37	Y..90S-4
6.50	219	12000	KS	77 KRF37	Y..90L-4
			KSF	77 KRF37	Y..90L-4
			KSA	77 KRF37	Y..90L-4
			KSAF	77 KRF37	Y..90L-4
$M_{max}=2500Nm$					
0.05	25987	27500			
0.06	23940	27500			
0.07	20568	27500			
0.08	18265	27500			
0.08	16774	27500	KS	87 KRF57	Y..63M ₁ -4
0.09	14820	27500	KSF	87 KRF57	Y..63M ₁ -4
0.10	13160	27500	KSA	87 KRF57	Y..63M ₁ -4
0.12	11200	27500	KSAF	87 KRF57	Y..63M ₁ -4
0.14	9904	27500			
0.16	8549	27500			
0.18	7643	27500			
0.21	6706	27500			
0.22	5875	27500	KS	87 KRF57	Y..63M ₂ -4
0.25	5187	27500	KSF	87 KRF57	Y..63M ₂ -4
0.29	4606	27500	KSA	87 KRF57	Y..63M ₂ -4
0.34	3872	27500	KSAF	87 KRF57	Y..63M ₂ -4
0.37	3475	27500	KS	87 KRF57	Y..71M ₁ -4
0.45	2905	27500	KSF	87 KRF57	Y..71M ₁ -4
0.50	2586	27500	KSA	87 KRF57	Y..71M ₁ -4
			KSAF	87 KRF57	Y..71M ₁ -4
0.59	2335	27500	KS	87 KRF57	Y..71M ₂ -4
0.67	2054	27500	KSF	87 KRF57	Y..71M ₂ -4
0.76	1824	27500	KSA	87 KRF57	Y..71M ₂ -4
			KSAF	87 KRF57	Y..71M ₂ -4
0.85	1631	27500	KS	87 KRF57	Y..80M ₁ -4
1.00	1332	27500	KSF	87 KRF57	Y..80M ₁ -4
1.20	1191	27500	KSA	87 KRF57	Y..80M ₁ -4
			KSAF	87 KRF57	Y..80M ₁ -4

n_2 [1/min]	i	F_r [N]	Frame size		Motor
$M_{max}=2500Nm$					
1.40	1032	27500	KS	87 KRF57	Y..80M ₂ -4
1.50	930	27500	KSF	87 KRF57	Y..80M ₂ -4
			KSA	87 KRF57	Y..80M ₂ -4
			KSAF	87 KRF57	Y..80M ₂ -4
1.70	831	27500	KS	87 KRF57	Y..90S-4
2.00	719	27500	KSF	87 KRF57	Y..90S-4
2.30	624	27500	KSA	87 KRF57	Y..90S-4
2.60	558	27500	KSAF	87 KRF57	Y..90S-4
3.00	485	27500	KS	87 KRF57	Y..90L-4
			KSF	87 KRF57	Y..90L-4
			KSA	87 KRF57	Y..90L-4
			KSAF	87 KRF57	Y..90L-4
$M_{max}=2450Nm$					
3.30	435	27600	KS	87 KRF57	Y..90L-4
			KSF	87 KRF57	Y..90L-4
			KSA	87 KRF57	Y..90L-4
			KSAF	87 KRF57	Y..90L-4
3.80	378	27600	KS	87 KRF57	Y..100L ₁ -4
			KSF	87 KRF57	Y..100L ₁ -4
			KSA	87 KRF57	Y..100L ₁ -4
			KSAF	87 KRF57	Y..100L ₁ -4
$M_{max}=2400Nm$					
4.40	323	27700	KS	87 KRF57	Y..100L ₁ -4
5.10	281	27700	KSF	87 KRF57	Y..100L ₁ -4
			KSA	87 KRF57	Y..100L ₁ -4
			KSAF	87 KRF57	Y..100L ₁ -4
$M_{max}=4200Nm$					
0.04	33818	32800			
0.04	31154	32800	KS	97 KRF57	Y..63M ₁ -4
0.05	27847	32800	KSF	97 KRF57	Y..63M ₁ -4
0.06	24641	32800	KSA	97 KRF57	Y..63M ₁ -4
0.06	21537	32800	KSAF	97 KRF57	Y..63M ₁ -4
0.07	18749	32800			
0.09	16233	32800	KS	97 KRF57	Y..63M ₂ -4
0.09	14576	32800	KSF	97 KRF57	Y..63M ₂ -4
0.11	12752	32800	KSA	97 KRF57	Y..63M ₂ -4
0.12	11267	32800	KSAF	97 KRF57	Y..63M ₂ -4
0.14	10078	32800			
0.15	8608	32800	KS	97 KRF57	Y..63M ₂ -4
0.17	7554	32800	KSF	97 KRF57	Y..63M ₂ -4
0.20	6640	31300	KSA	97 KRF57	Y..63M ₂ -4
0.23	5780	31300	KSAF	97 KRF57	Y..63M ₂ -4
0.27	4937	31300			
0.29	4444	31300	KS	97 KRF57	Y..71M ₁ -4
0.32	4017	31300	KSF	97 KRF57	Y..71M ₁ -4
0.38	3453	31300	KSA	97 KRF57	Y..71M ₁ -4
0.42	3108	31300	KSAF	97 KRF57	Y..71M ₁ -4

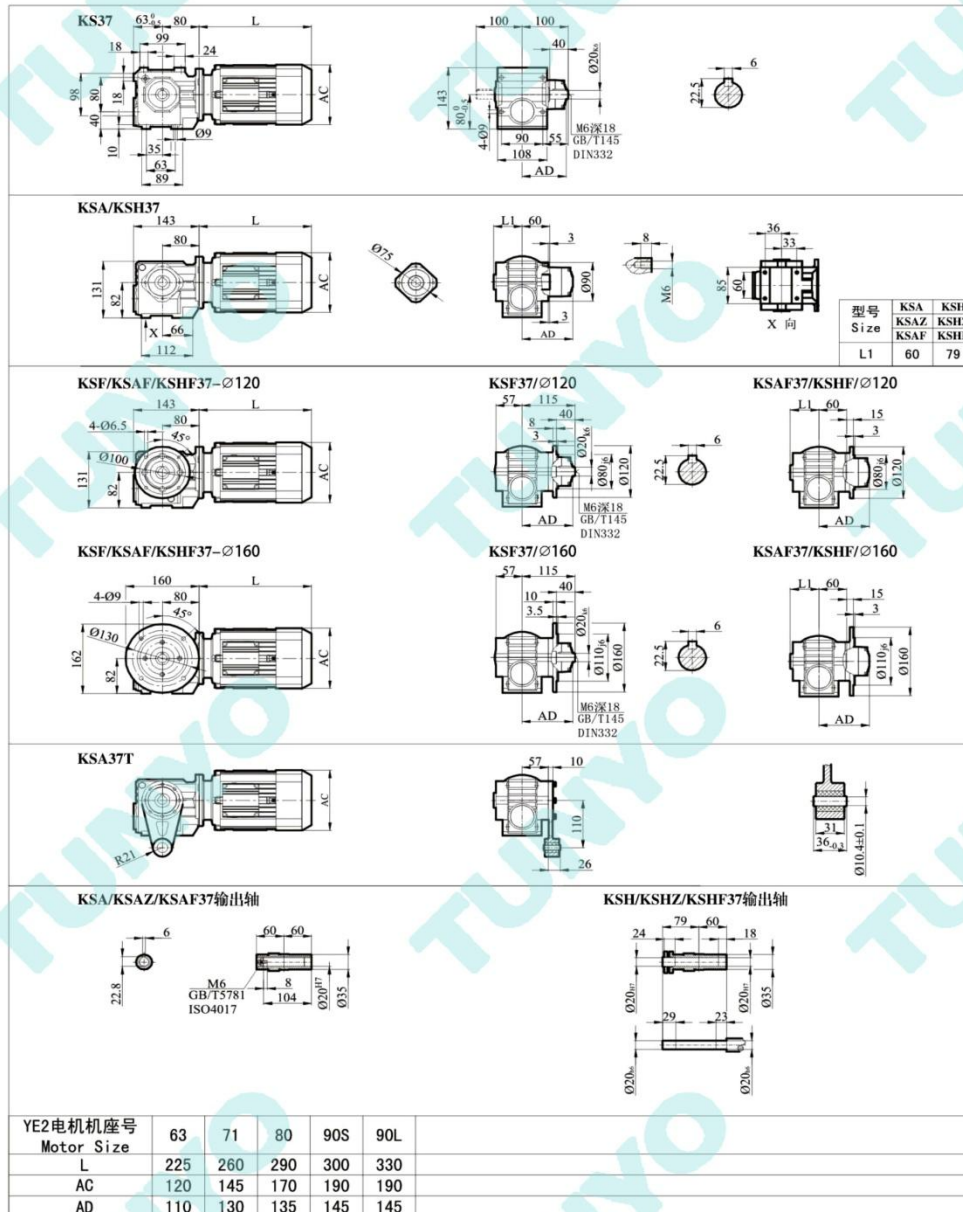
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

n₂ [1/min]	i	Fr [N]	Frame size		Motor
M_{max}=4200Nm					
0.52	2654	31300	KS	97 KRF57	Y..71M₁-4
0.59	2329	31300	KSF	97 KRF57	Y..71M₁-4
			KSA	97 KRF57	Y..71M₁-4
			KSAF	97 KRF57	Y..71M₁-4
0.66	2081	31300	KS	97 KRF57	Y..80M₁-4
0.74	1860	31300	KSF	97 KRF57	Y..80M₁-4
0.88	1574	31300	KSA	97 KRF57	Y..80M₁-4
			KSAF	97 KRF57	Y..80M₁-4
1.00	1394	31300	KS	97 KRF57	Y..80M₁-4
1.20	1223	31300	KSF	97 KRF57	Y..80M₁-4
			KSA	97 KRF57	Y..80M₁-4
			KSAF	97 KRF57	Y..80M₁-4
1.30	1070	31300	KS	97 KRF57	Y..90S-4
1.50	928	31300	KSF	97 KRF57	Y..90S-4
1.70	824	31300	KSA	97 KRF57	Y..90S-4
			KSAF	97 KRF57	Y..90S-4

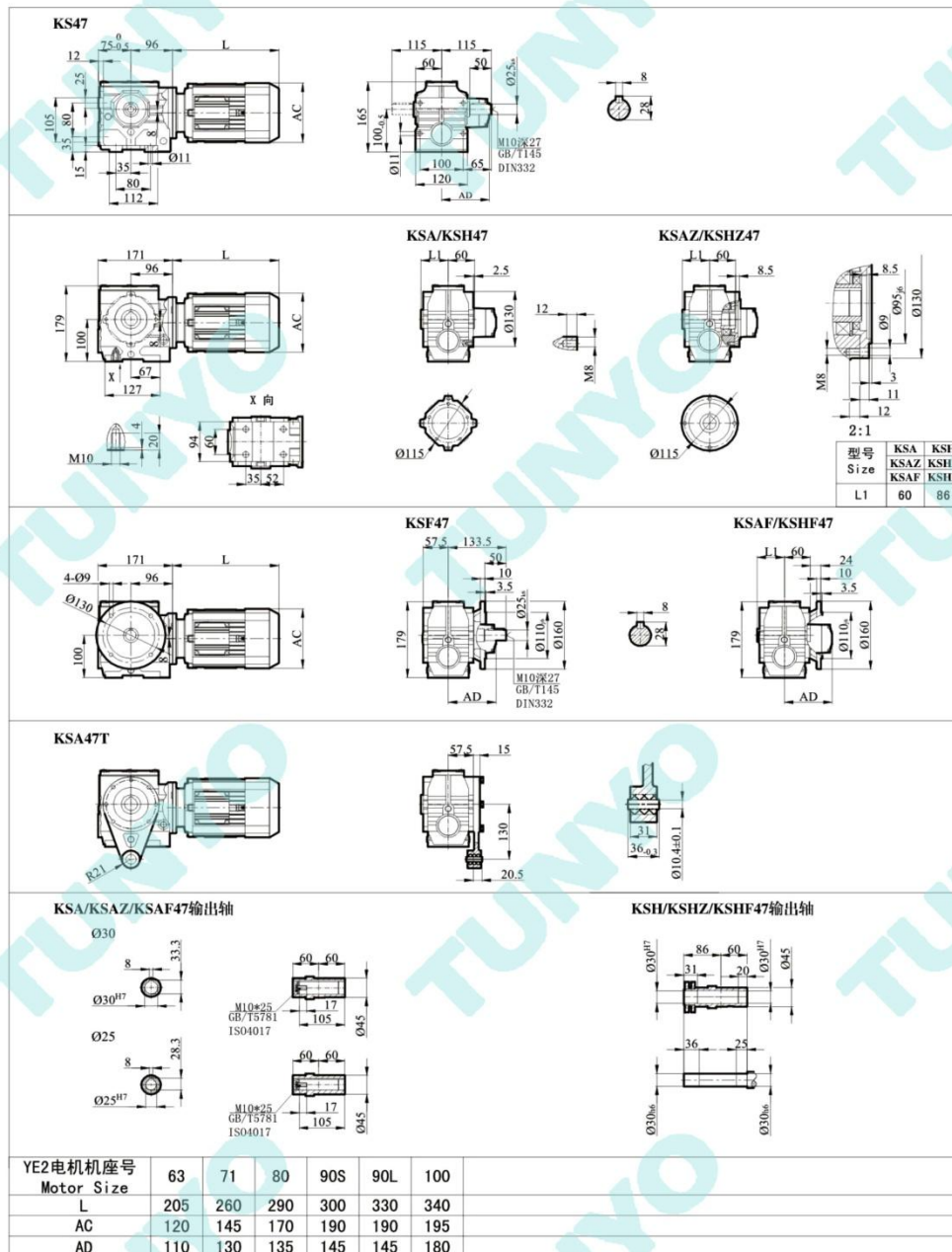
n₂ [1/min]	i	Fr [N]	Frame size		Motor
M_{max}=4200Nm					
2.00	714	32800	KS	97 KRF57	Y..90L-4
2.30	626	31300	KSF	97 KRF57	Y..90L-4
2.70	538	31300	KSA	97 KRF57	Y..90L-4
			KSAF	97 KRF57	Y..90L-4
2.90	484	31400	KS	97 KRF57	Y..100L-4
3.40	420	31400	KSF	97 KRF57	Y..100L-4
3.80	376	31400	KSA	97 KRF57	Y..100L-4
			KSAF	97 KRF57	Y..100L-4
4.40	327	31500	KS	97 KRF57	Y..100L-4
5.10	287	31500	KSF	97 KRF57	Y..100L-4
			KSA	97 KRF57	Y..100L-4
			KSAF	97 KRF57	Y..100L-4
5.80	252	31500	KS	97 KRF57	Y..112M-4
6.70	219	31600	KSF	97 KRF57	Y..112M-4
			KSA	97 KRF57	Y..112M-4
			KSAF	97 KRF57	Y..112M-4

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

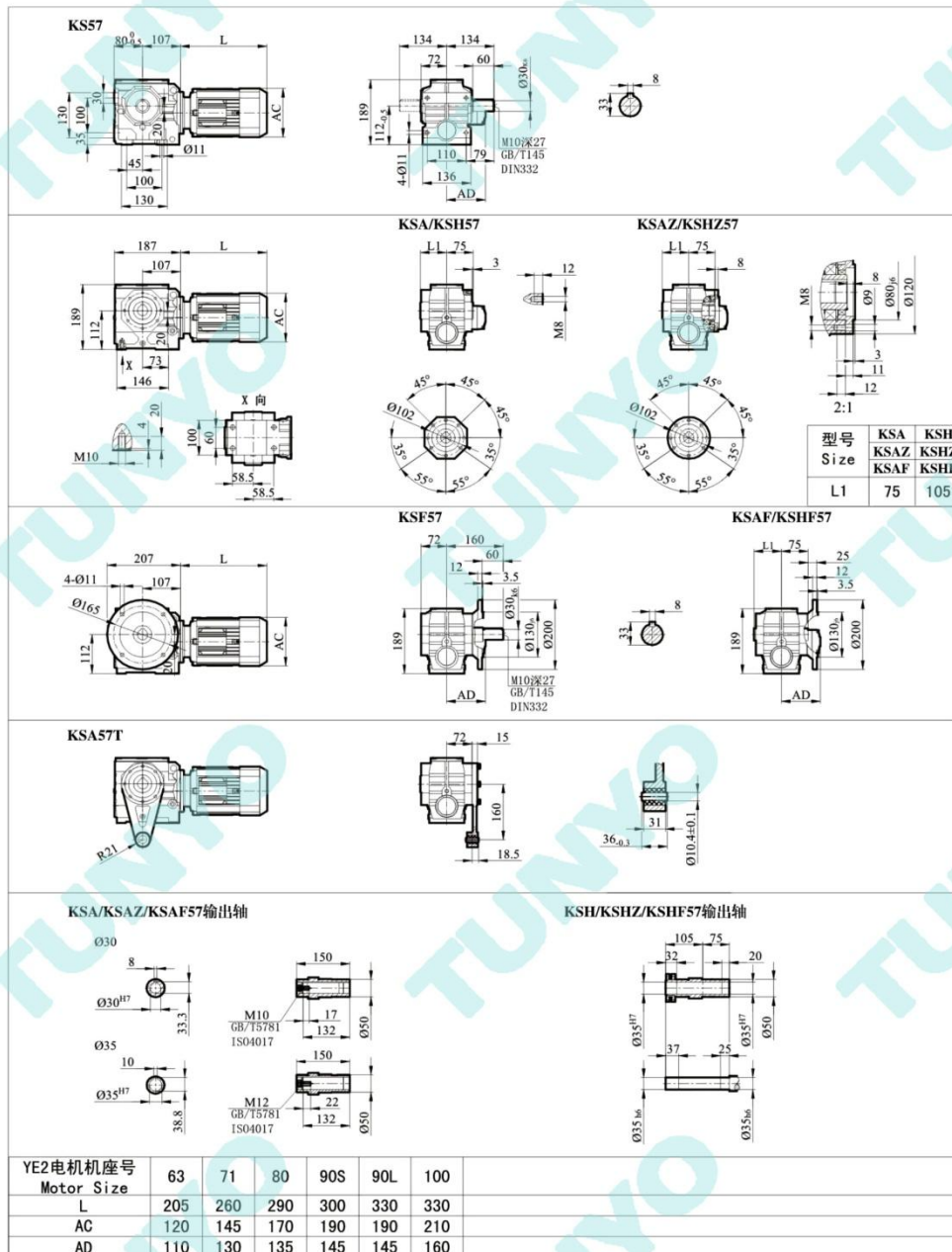
5. 9 外形尺寸 / Dimensions



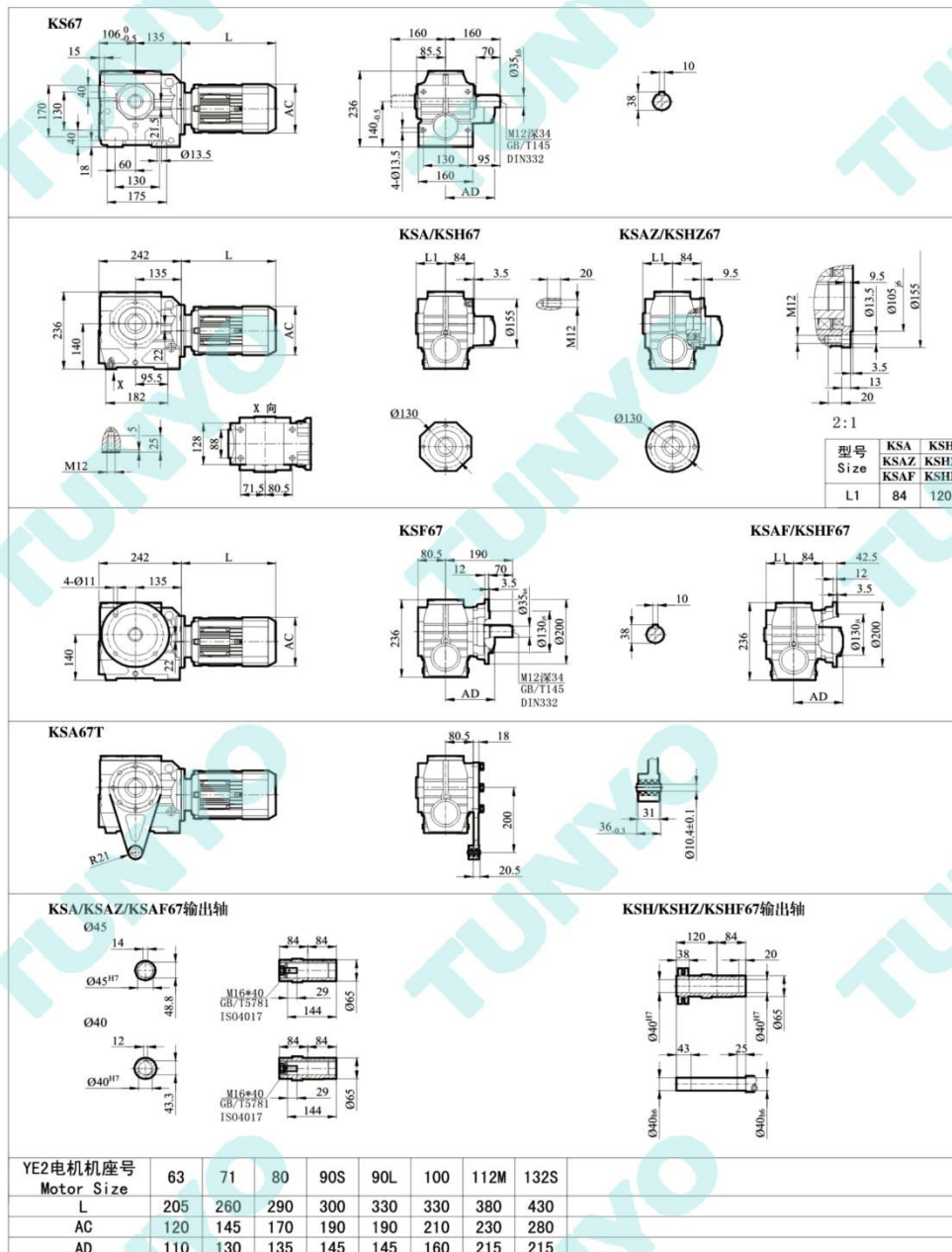
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor



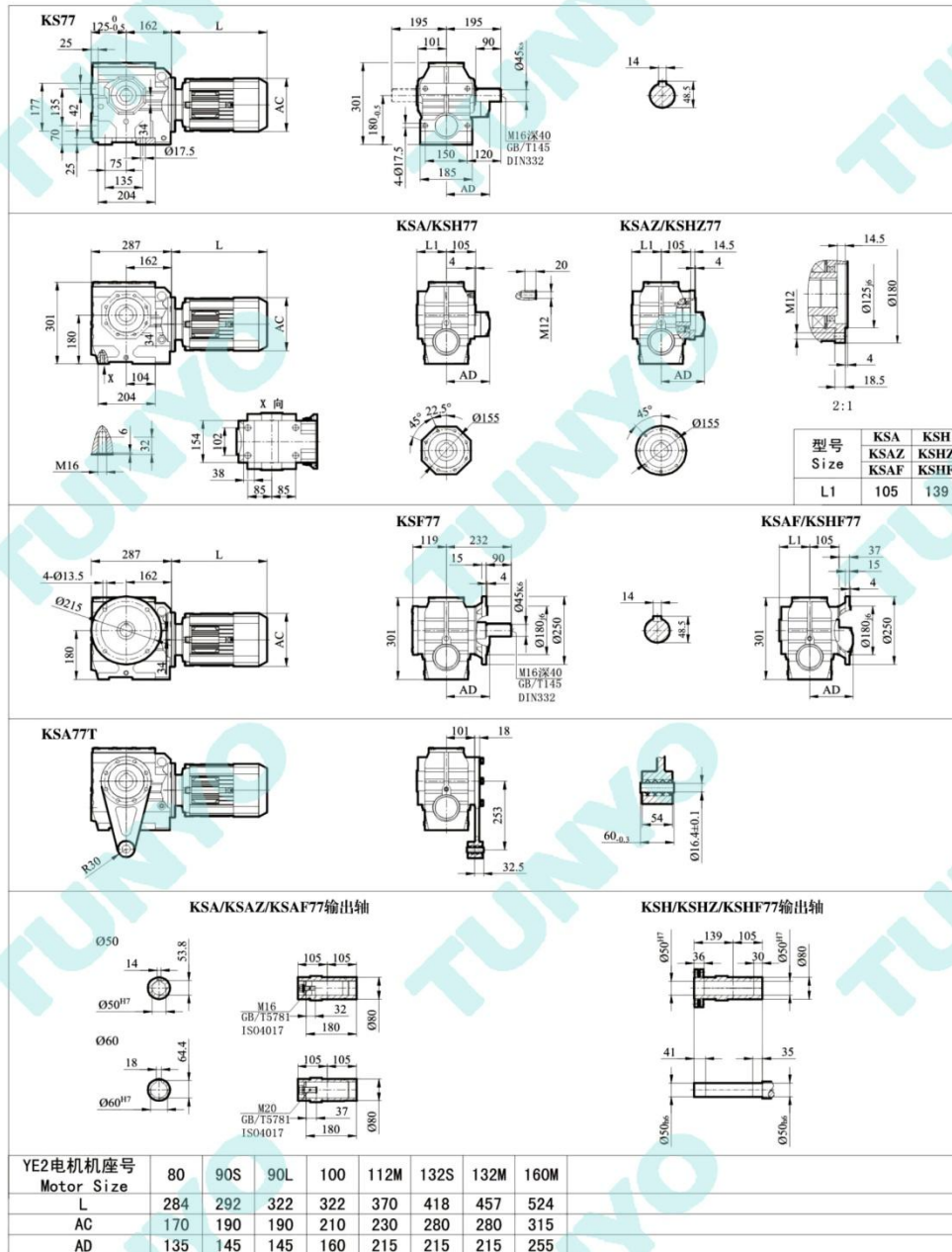
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor



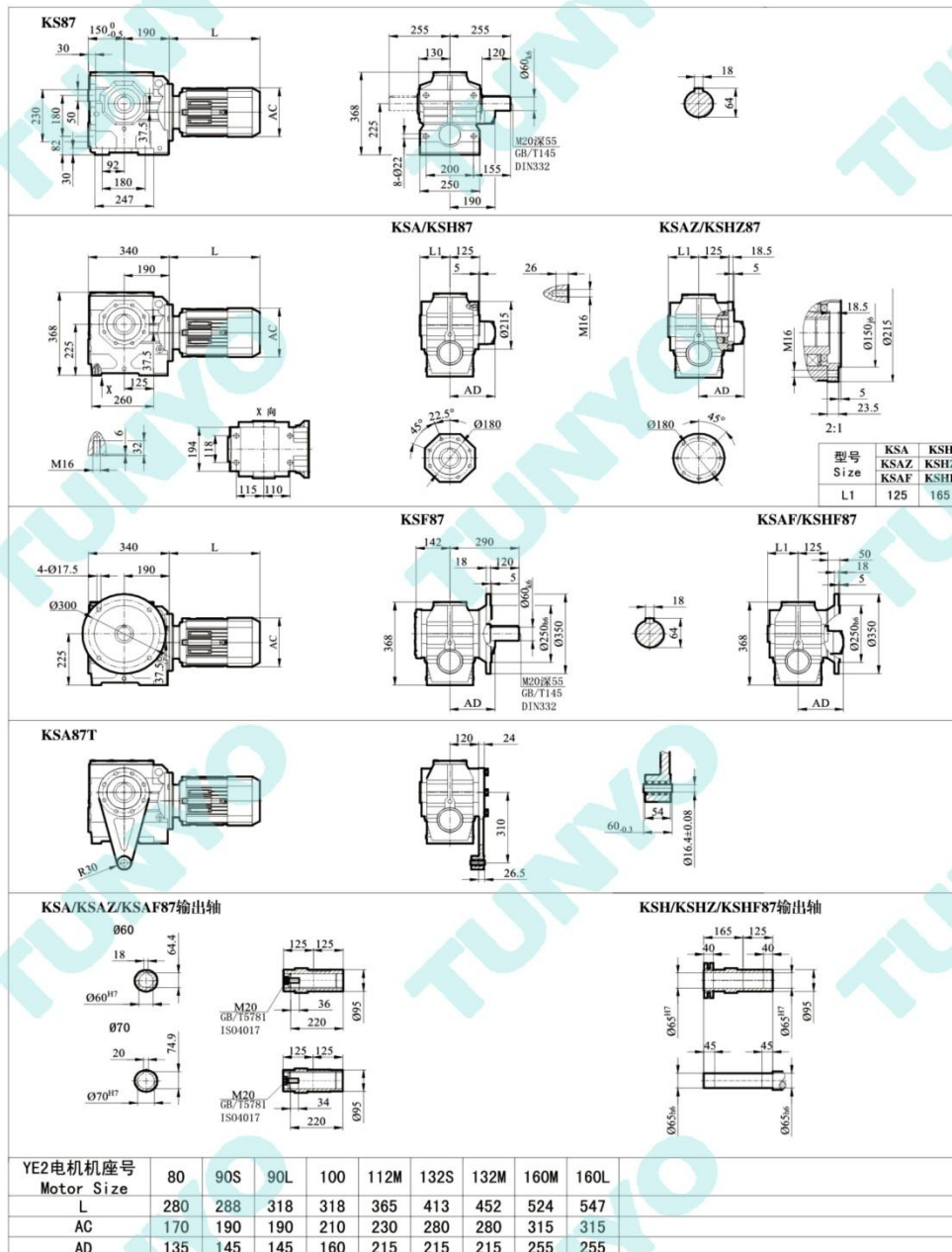
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor



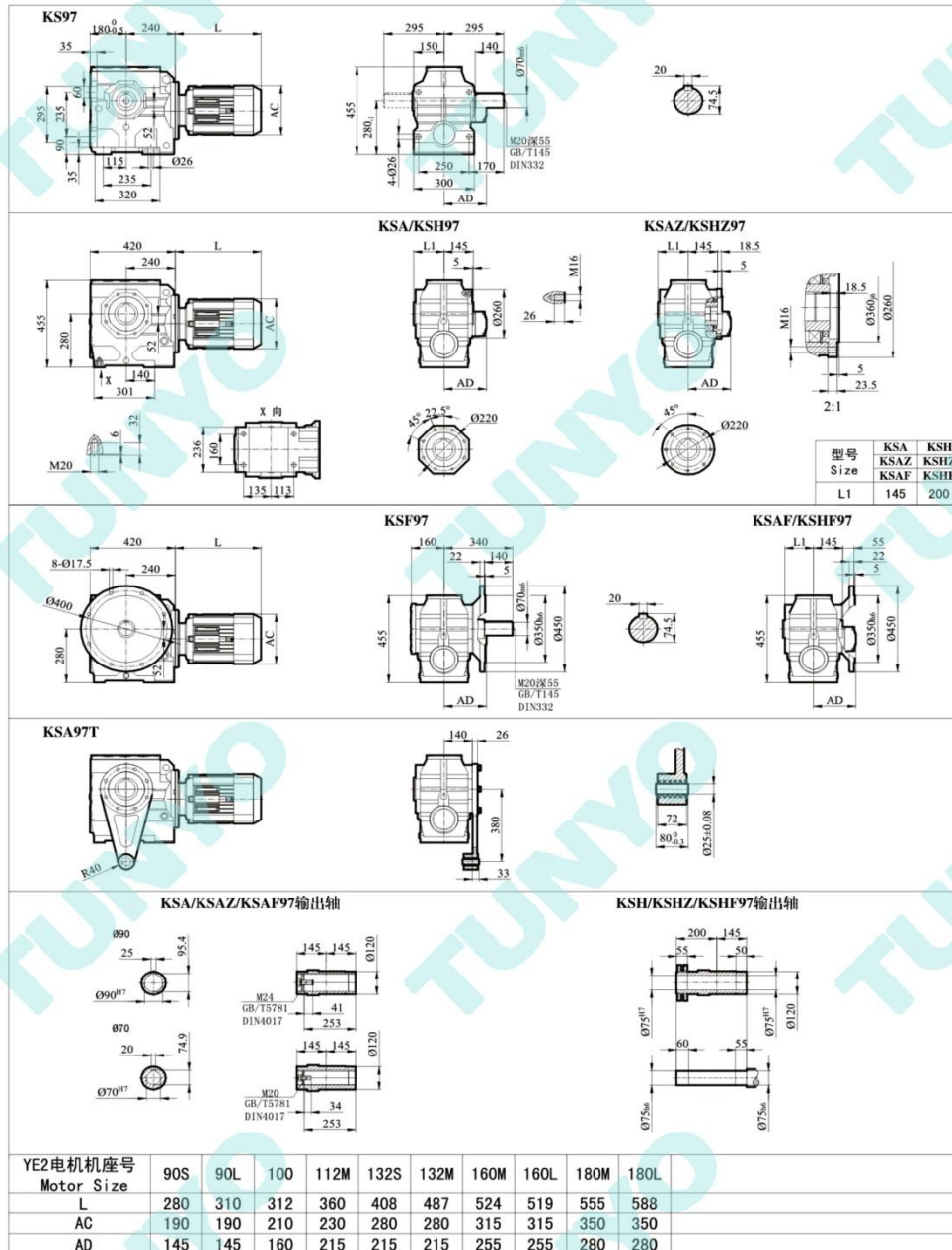
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor



K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

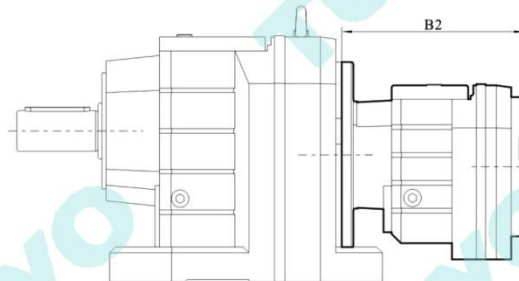


K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor



6. 輸入模块外形尺寸/ Dimensions of Input Module

6.1 KRF..外形尺寸/KRF.. Dimensions



机座号/Frame size	B2
KR..27KRF17	139
KR..37KRF17	139
KR..47KRF37	157
KR..57KRF37	157
KR..67KRF37	157
KR..77KRF37	157
KR..87KRF57	187
KR..97KRF57	187
KR..107KRF77	220
KR..137KRF77	220
KR..147KRF77	220
KR..147KRF87	272
KR..167KRF97	320
KR..167KRF107	355

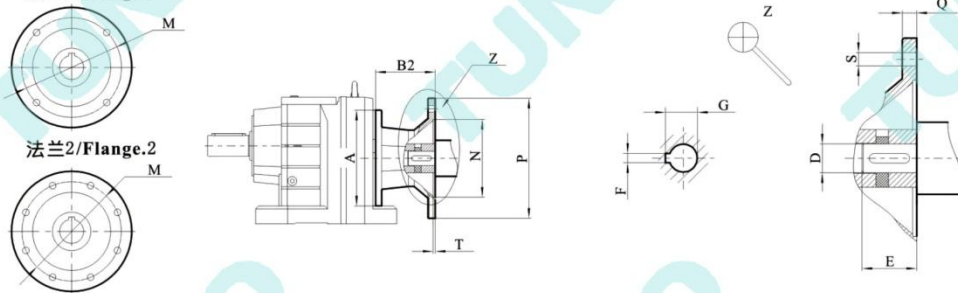
机座号/Frame size	B2
KF..27KRF17	139
KF..37KRF17	139
KF..47KRF17	139
KF..57KRF37	157
KF..67KRF37	157
KF..77KRF37	157
KF..87KRF57	187
KF..97KRF57	187
KF..107KRF77	220
KF..127KRF77	220
KF..127KRF87	272
KF..157KRF97	320

机座号/Frame size	B2
KH..37KRF17	139
KH..47KRF37	157
KH..57KRF37	157
KH..67KRF37	157
KH..77KRF37	157
KH..87KRF57	187
KH..97KRF57	187
KH..107KRF77	220
KH..127KRF77	220
KH..127KRF87	272
KH..157KRF97	320
KH..157KRF107	355
KH..167KRF97	320
KH..167KRF107	355
KH..187KRF97	320
KH..187KRF107	355

机座号/Frame size	B2
KS..37KRF17	139
KS..47KRF17	139
KS..57KRF17	139
KS..67KRF37	157
KS..77KRF37	157
KS..87KRF57	187
KS..97KRF57	187

K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

6 2 AM(IEC)..外形尺寸/AM (IEC) .. Dimensions
法兰1/Flange.1



型号 Frame size	AM	Flange	A	B2	D	E	F	G	M	N	P	Q	S	T
KR..27/37 KF..27/37/47 KS..37/47/57 KH..37	AM63	1	120	70	11	23	4	12.8	115	95	140	10	4-Φ9	3.5
	AM71				14	30	5	16.3	130	110	160			
	AM80			90	19	40	6	21.8	165	130	200	12	4-Φ11	4.5
	AM90				24	50	8	27.3						
	AM100			110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
KR..47/57/67 KF..57/67 KS..67 KH..47/57/67	AM63	1	160	70	11	23	4	12.8	115	95	140	10	4-Φ9	3.5
	AM71				14	30	5	16.3	130	110	160			
	AM80			90	19	40	6	21.8	165	130	200	12	4-Φ11	4.5
	AM90				24	50	8	27.3						
	AM100			110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
	AM112													
	AM132S/M			140	38	80	10	41.3	265	230	300	16		
KR..77 KF..77 KS..77 KH..77	AM63	1	200	70	11	23	4	12.8	115	95	140	10	4-Φ9	3.5
	AM71				14	30	5	16.3	130	110	160			
	AM80			90	19	40	6	21.8	165	130	200	12	4-Φ11	4.5
	AM90				24	50	8	27.3						
	AM100			110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
	AM112													
	AM132S/M			140	38	80	10	41.3	265	230	300	16		
	AM132ML													
	AM160			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
KR..87 KF..87 KS..87 KH..87	AM80	1	250	90	19	40	6	21.8	165	130	200	12	4-Φ11	4.5
	AM90				24	50	8	27.3						
	AM100			110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
	AM112													
	AM132S/M			140	38	80	10	41.3	265	230	300	16		
	AM132ML													
	AM160			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM180				48		14	51.8						

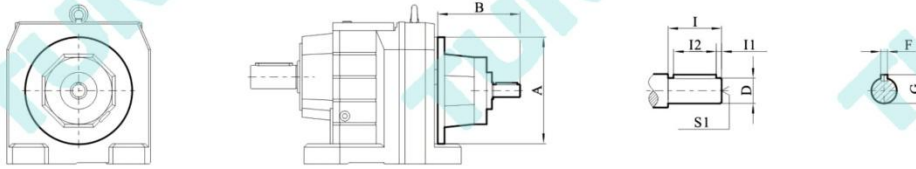
K系列斜齒輪減速電機 K Series Helical Gear Reduction Motor

型号 Frame size	AM	Flange	A	B2	D	E	F	G	M	N	P	Q	S	T
KR..97 KF..97 KS..97 KH..97	AM90	1	300	90	24	50	8	27.3	165	130	200	12	4-Φ11	4.5
	AM100			110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
	AM112			140	38	80	10	41.3	265	230	300	16		
	AM132S/M			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM132ML						14	51.8						
	AM160						16	59.3						
	AM180			210	55									
AM200														
KR..107 KF..107 KH..107	AM100	1	350	110	28	60	8	31.3	215	180	250	15	4-Φ13.5	5
	AM112			140	38	80	10	41.3	265	230	300	16		
	AM132S/M			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM132ML						14	51.8						
	AM160			210	55	16	59.3	350	300	400	20	8-Φ17.5	7	
	AM180													
	AM200			250	60	140	18	64.4	400	350	450	22		
AM225		2												
KR..137	AM132S/M	1	400	140	38	80	10	41.3	265	230	300	16	4-Φ13.5	5
	AM132ML			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM160						14	51.8						
	AM180			210	55	16	59.3	350	300	400	20	8-Φ17.5	7	
	AM200													
	AM225	2		250	60	140	18	64.4	400	350	450	22	8-Φ17.5	
	AM250			320	65			69.4	500	450	550	25	8-Φ17.5	
KR..147 KF..127 KH..127	AM132S/M	1	450	140	38	80	10	41.3	265	230	300	16	4-Φ13.5	5
	AM132ML			180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM160						14	51.8						
	AM180			210	55	16	59.3	350	300	400	20	8-Φ17.5	7	
	AM200													
	AM225	2		250	60	140	18	64.4	400	350	450	22		
	AM250			320	65			69.4	500	450	550	25		
AM280		75	20	79.9										
KR..167 KF..157 KH..157 KH..167 KH..187	AM160	1	550	180	42	110	12	45.3	300	250	350	18	4-Φ17.5	6
	AM180			210	48		14	51.8						
	AM200				55	140	16	59.3	350	300	400	20		
	AM225	60			18		64.4	400	350	450	22	8-Φ17.5	7	
	AM250	65		79.9										500
	AM280	2		320	75		20	79.9						

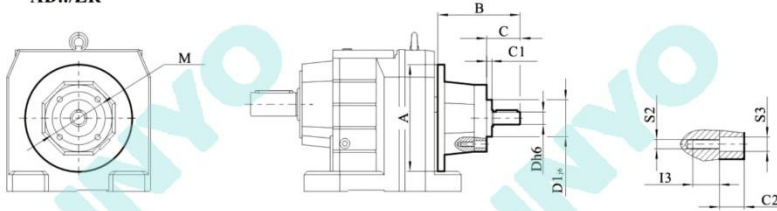
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6 3 AD..外形尺寸/AD.. Dimensions

AD..



AD../ZR



型号 Frame size	AD..	A	B	C	C1	C2	D	D1	F	G	I	I1	I2	I3	M	S1	S2	S3
KR..27	AD1	120	100	-	-	-	16	-	5	18	40	4	32	-	-	M5*12.5	-	-
KF..27	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KR/KF..37	AD1		100	-	-	-	16	-	5	18	40	4	32	-	-	M5*12.5	-	-
KH/KS..37	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KF..47	AD1		100	-	-	-	16	-	5	18	40	4	32	-	-	M5*12.5	-	-
KS..47	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KS..57	AD1	160	100	-	-	-	16	-	5	18	40	4	32	-	-	M5*12.5	-	-
	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KR..47	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KH..47	AD3, AD3/ZR		130	60	8	15.5	24	70	8	27	50	5	40	16	98	M8*19	M10	11
KR/KF..57	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KH..57	AD3, AD3/ZR		130	60	8	15.5	24	70	8	27	50	5	40	16	98	M8*19	M10	11
KR/KF..67	AD2, AD2/ZR	200	114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KH/KS..67	AD3, AD3/ZR		130	60	8	15.5	24	70	8	27	50	5	40	16	98	M8*19	M10	11
KR/KF..77	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
	AD3, AD3/ZR		130	60	8	15.5	24	70	8	27	50	5	40	16	98	M8*19	M10	11
KH/KS..77	AD4, AD4/ZR		186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
	AD2, AD2/ZR		114	50	8	13.5	19	55	6	21.5	40	4	32	12	78	M6*16	M8	9
KR/KF..87	AD3, AD3/ZR	250	130	70	8	15.5	28	70	8	31	60	5	50	16	98	M8*19	M10	11
	AD4, AD4/ZR		186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
KH/KS..87	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5

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型号 Frame size	AD..	A	B	C	C1	C2	D	D1	F	G	I	I1	I2	I3	M	S1	S2	S3
KR/KF..97 KH/KS..97	AD3, AD3/ZR	300	130	70	8	15.5	28	70	8	31	60	5	50	16	98	M8*19	M10	11
	AD4, AD4/ZR		186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KR..107 KF..107 KH..107	AD3, AD3/ZR	350	130	70	8	15.5	28	70	8	31	60	5	50	16	98	M8*19	M10	11
	AD4, AD4/ZR		186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KF..127 KH..127	AD4, AD4/ZR	450	186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M12*28	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
	AD7, AD7/ZR		282.5	133	13	19	55	125	16	59	110	10	90	30	190	M20*42	M20	22
KR..137	AD8, AD8/ZR	400	374	155	15	22.5	70	120	20	74.5	140	15	110	19.5	210	M20*12	M12	13.5
	AD4, AD4/ZR		186	95.5	13	16	38	92	10	41	80	5	70	20	120	M12*28	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KR147	AD7, AD7/ZR	450	282.5	133	13	19	55	125	16	59	110	10	90	30	190	M20*42	M20	22
	AD8, AD8/ZR		374	155	15	22.5	70	120	20	74.5	140	15	110	19.5	210	M20*12	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M12*28	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KF..157 KH..157	AD7, AD7/ZR	550	282.5	133	13	19	55	125	16	59	110	10	90	30	190	M20*42	M20	22
	AD8, AD8/ZR		374	155	15	22.5	70	120	20	74.5	140	15	110	19.5	210	M20*12	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KR..167 KH..167	AD7, AD7/ZR	550	282.5	133	13	19	55	125	16	59	110	10	90	30	190	M20*42	M20	22
	AD8, AD8/ZR		374	155	15	22.5	70	120	20	74.5	140	15	110	19.5	210	M20*12	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5
KH..187	AD7, AD7/ZR	550	282.5	133	13	19	55	125	16	59	110	10	90	30	190	M20*42	M20	22
	AD8, AD8/ZR		374	155	15	22.5	70	120	20	74.5	140	15	110	19.5	210	M20*12	M12	13.5
	AD5, AD5/ZR		240	126	11	24	42	120	12	45	110	10	70	20	160	M16*36	M12	13.5
	AD6, AD6/ZR		271.5	130.5	11	22.5	48	130	14	51.5	110	10	80	26	193	M16*36	M16	17.5

7. 选型指南 / Selection Guide

减速机通常是根據恒轉矩、起停不頻繁及常溫的情況設計。在按选型參數表選擇減速器機型號前，先根據負載要求確定需要的輸出扭矩，然後根據工況確定使用系數及減速器機型號。

The gear units are designed under the condition as follows: constant torque, low start up frequency, normal atmospheric temperature. Before choosing a gear unit in the performance parameter table, first determine the output torque according to the load type, then determine the service factor and gear unit type according to the working condition.

7.1 选型相關參數 / Relevant Parameter

參數名稱 Parameter	符號 Code	計算公式 Calculation formula	說明 Note
功率 Power	P	$P_1 = P_2 / \eta$ [Nm] $P_{1a} \geq P_1 \times K$ [Nm]	P ₁ -輸入功率 -Input power P ₂ -輸出功率 -Out Power P _{1a} -電機額定功率 -Rated power of driving motor η -傳動效率 -Transmission efficiency K-使用系數 -Service factor
傳動比 Ratio	I	$I = n_1 / n_2$	n ₁ -輸入轉速 -Input speed n ₂ -輸出轉速 -Output speed
扭矩 Torque	M	$M_2 = 9550 \times P_1 \times \eta / n_2$ [Nm] $M_{2a} \geq M_2 \times K$ [Nm]	M ₂ -輸出扭矩 -Output torque M _{2a} -選用輸出扭矩 -Selected output torque

說明:

1. KR, KF, KH減速器的傳動效率 η 為94%;
2. 為了優化工作條件和提高使用壽命，建議使用1400 r/min或更低轉速;
3. 傳動比通常為小數，在选型表中保留兩位小數。

Notes:

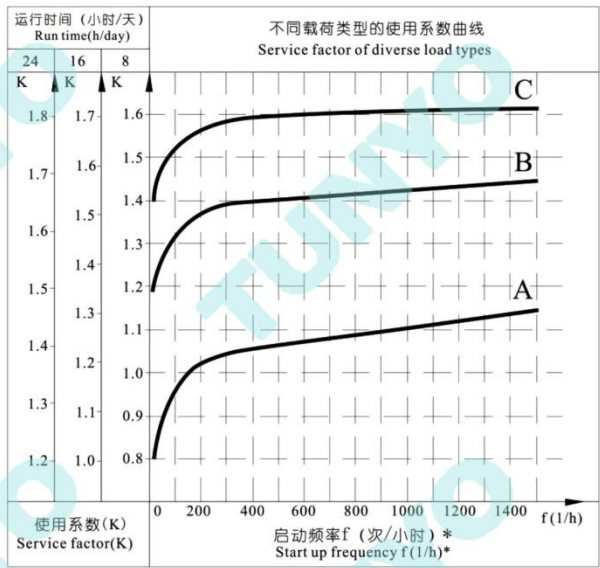
1. KR, KF, KH gear units' transmission efficiency $\eta = 94\%$.
2. To optimize the working conditions and prolong the service life, 1400 r/min or lower rotation speed is suggested.
3. Usually transmission ratio is decimal fraction with 2 radix point tagged in selection table.

7.2 使用系数(K)/Service Factor (K)

减速机的运行与载荷类型、运行时间、启动频次及环境温度等因素有关。为了正确选择减速机的型号，我们将这些影响因素综合为一个使用系数K。

The running of gear unit is related to load type, daily operation time, start up frequency and ambient temperature. Service factory, K, is determined by these factors.

(1) 使用系数(K)选择图 / Service Factor Selection Figure



说明:

- 图中的A、B、C为载荷类型
-A: 均匀载荷;
-B: 中等冲击载荷;
-C: 重冲击载荷。
- * 启动频率 f , 包括每小时所有启动、制动的次数, 及变速电机高低速切换时的次数。
- 环境温度对使用系数的影响:
-环境温度30/40℃ : $K*(1.15-1.35)$
-环境温度40/50℃ : $K*(1.35-1.65)$
-环境温度50/60℃ : $K*(1.65-1.85)$

Notes:

- A, B, C in above figure is load type.
-A: Uniform Load.
-B: Moderate Load.
-C: Heavy Load.
- * Start up frequency, including all the starts, brakes and speed switching when using variable speed motor.
- Effect of ambient temperature on service factor:
-Ambient Temperature30/40℃: $K*(1.15-1.35)$.
-Ambient Temperature40/50℃: $K*(1.35-1.65)$.
-Ambient Temperature50/60℃: $K*(1.65-1.85)$.

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(2) 載荷類型表 / Load Type Table

用途 Application		载荷 类型 Load type	用途 Application		载荷 类型 Load type	用途 Application		载荷 类型 Load type
钢铁工业 Iron and steel industry	链式输送机 Chain conveyer	B	运输 Transmission	皮带式输送机 (散状物) Ribbon conveyer (bulk)	B	食品工业 Food industry	粉碎机 Kibbler	C
	绕线机(带材或线材) Winding machine (strip or wire)	B		皮带式输送机 (块状物) Ribbon conveyer (nubby)	C		甘蔗切碎机 Cane chopper	B
	拉丝机 Draw bench machine	B		斗式提升机 Bucket lifter	B		甜菜切碎机 Beet chopper	B
	辊道(重的) Roller table (heavy)	C		链式提升机 Chain lifter	C		甜菜清洗机 Beet washer	B
	辊道(轻的) Roller table (light)	B		螺旋输送机 Worm conveyer	B		搅拌机(液状物) Mixer(liquid)	A
	横向移动设备 Horizontal mobile device	B		运货升降机 Lifter	B	木工及建筑工业 Carpentry & construction industry	搅拌机(半液状物) Mixer(semi-liquid)	B
	连续铸造设备 Continuous casting equipment	C		回旋输送机 Whirl conveyer	C		剥皮机 Barker	C
	铸锭装卸机械 Ingot handling equipment	C		冷却或干燥滚筒 Cooling or dryness rolling drum	B		刨床 Planer	B
	滚轮调整传动装置 Roller adjust device	B		搅拌机(块状物) Mixer(nubby)	B		木工机床 Wood processing machine	A
	辊式拉伸矫直机 Tension roller straightening	B		离心机 Centrifuge	B		筑路机械 Road building machine	B
运输 Transmission	板式输送机 Plate conveyer	B		压延或挤压机 Calender/extruder	B		混凝土搅拌机 Concrete mixer	B
	压载升降机 Ballast lifter	B		搅拌机 Mixer	C			
	斗式输送机 Bucket conveyer	B		滚轧机 Roller machine	C			

7.3 徑向載荷 / Radial Loads

當減速機輸出軸承受徑向載荷時，須根據下面的公式對減速機輸出軸的受力進行計算，並將此計算結果 F_{ra} 與性能參數表中的許可徑向力 F_r 進行比較。

減速機輸出軸的實際徑向力 F_{ra} 不允許大於性能參數表中的數值 F_r 。

The radial load on the output bearing is calculated as follow: compare the calculation result F_{ra} with the permitted radial loads given in the selection table.

F_{ra} has to be smaller than or equal to F_r .

$$F_{ra}=2000*M*f_z/d_o \text{ [N]}$$

F_{ra} : 作用在輸出軸中點的徑向力[N]

M : 作用在輸出軸上的扭矩[Nm]

f_z : 傳動附加系數（見下表）

d_o : 輸出軸上傳動件平均直徑[mm]

F_{ra} : Radial force application in the centre of the output shaft.

M : Torque on the output shaft.

f_z : Transmission element factor (following table)

d_o : Average diameter of the mounted transmission element.

傳動件 Transmission element	傳動附加系數 Transmission element factor f_z	注釋 comments
齒輪 Gears	1.00	=17齒 teeth
	1.15	<17齒 teeth
鏈輪 Chain sprockets	1.00	=20齒 teeth
	1.25	<20 齒 teeth
	1.4	<13 齒 teeth
V帶輪 Narrow V-belt pulleys	1.75	有預緊力作用 Influence of the tensile force
平帶輪 Flat-belt pulleys	2.5	有預緊力作用 Influence of the tensile force
齒帶輪 Toothed belt pulleys	2.5	有預緊力作用 Influence of the tensile force

當徑向載荷作用點不在輸出軸的中點時，必須根據下面的公式重新計算減速機允許的最大徑向力 F_r' 。

F_{xl} 是基于軸承使用壽命的；

F_{xw} 是基于輸出軸強度的。

將 F_{xl} 和 F_{xw} 中的較小者作為減速機允許的最大徑向力 F_r' 。

The radial loads must be calculated using the following formula in the event of force application not in the centre of the shaft end.

The smaller of the two values F_{xl} (according to the bearing service life) and F_{xw} (according to the shaft strength) is the permitted value for the radial load F_r' .

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$$F_{\text{al}} = F_r \cdot a / (b + x) \text{ [N]}$$

$$F_{\text{w}} = c / (f + x) \text{ [N]}$$

F_r : 性能参数表中列出的许可径向力[N]

x : 轴肩到实际作用点的距离[mm]

a, b, f : 减速机径向转换常数[mm] (见下表)

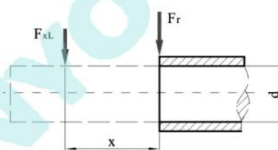
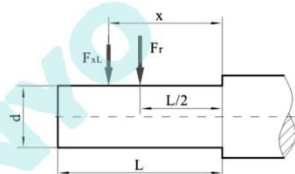
c : 减速机径向转换常数[N.mm] (见下表)

F_r : Permitted overhung load according to the selection table[N]

x : Distance from the shaft shoulder to the force application point[mm]

a, b, f : Gear unit constant for overhung load conversion[mm](see below table)

c : Gear unit constant for overhung load conversion[N.mm]



减速机型号 Gear unit type	a [mm]	b [mm]	c [mm]	f [mm]	d [mm]	L [mm]
KRX57	43.5	23.5	1.51x10 ⁵	34.2	20	40
KRX67	52.5	27.5	2.42x10 ⁵	39.7	25	50
KRX77	60.5	30.5	1.95x10 ⁵	0	30	60
KRX87	73.5	33.5	7.69x10 ⁵	48.9	40	80
KRX97	86.5	36.5	1.43x10 ⁶	53.9	50	100
KRX107	102.5	42.5	2.47x10 ⁶	62.3	60	120
KR07	72.0	52.0	4.67x10 ⁴	11	20	40
KR17	88.5	68.5	6.527x10 ⁴	17	20	40
KR27	106.5	81.5	1.56x10 ⁵	11.8	25	50
KR37	118	93	1.24x10 ⁵	0	25	50
KR47	137	107	2.44x10 ⁵	15	30	60
KR57	147.5	112.5	3.77x10 ⁵	18	35	70
KR67	168.5	133.5	2.51x10 ⁵	0	35	70
KR77	173.7	133.7	3.97x10 ⁵	0	40	80
KR87	216.7	166.7	8.47x10 ⁵	0	50	100
KR97	255.5	195.5	1.19x10 ⁶	0	60	120
KR107	285.5	215.5	2.06x10 ⁶	0	70	140
KR137	343.5	285.5	6.14x10 ⁶	30	90	170
KR147	402	297	8.65x10 ⁶	33	110	210
KR167	450	345	1.26x10 ⁷	0	120	210
KF..27	109.5	84.50	1.13x10 ⁵	0	25	50
KF..37	123.5	98.50	1.07x10 ⁵	0	25	50
KF..47	153.5	123.5	1.40x10 ⁵	0	30	60
KF..57	170.7	135.7	2.70x10 ⁵	0	35	70
KF..67	181.3	141.3	4.12x10 ⁵	0	40	80

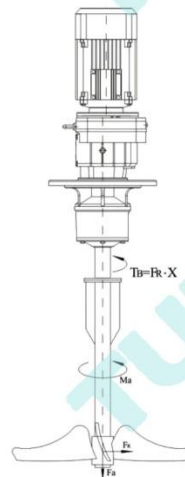
减速机型号 Gear unit type	a [mm]	b [mm]	c [mm]	f [mm]	d [mm]	L [mm]
KF..77	215.8	165.8	7.87x10 ⁵	0	50	100
KF..87	263.0	203.0	1.06x10 ⁶	0	60	120
KF..97	350.0	280.0	2.09x10 ⁶	0	70	140
KF..107	373.5	288.5	4.23x10 ⁶	0	90	170
KF..127	442.5	337.5	9.45x10 ⁶	0	110	210
KF..157	512.0	407.0	1.05x10 ⁷	0	120	210
KH..37	123.5	98.50	1.41x10 ⁵	0	25	50
KH..47	153.5	123.5	1.78x10 ⁵	0	30	60
KH..57	169.7	134.7	6.8x10 ⁵	32	35	70
KH..67	181.3	141.3	4.12x10 ⁵	0	40	80
KH..77	215.8	165.8	7.69x10 ⁵	0	50	100
KH..87	252.0	192.0	1.64x10 ⁶	0	60	120
KH..97	319.0	249.0	2.8x10 ⁶	0	70	140
KH..107	373.5	288.5	5.53x10 ⁶	0	90	170
KH..127	443.5	338.5	8.31x10 ⁶	0	110	210
KH..157	509.0	404.0	1.18x10 ⁷	0	120	210
KH..167	621.5	496.5	1.88x10 ⁷	0	160	250
KH..187	720.5	560.5	3.04x10 ⁷	0	190	320
KS..37	118.5	98.50	6.00x10 ⁴	0	20	40
KS..47	130.0	105.0	1.33x10 ⁵	0	25	50
KS..57	150.0	120.0	2.14x10 ⁵	0	30	60
KS..67	184.0	149.0	3.04x10 ⁵	0	35	70
KS..77	224.0	179.0	5.26x10 ⁵	0	45	90
KS..87	281.5	221.5	1.68x10 ⁶	0	60	120
KS..97	326.3	256.3	2.54x10 ⁶	0	70	140

7.4 KRM.. 选型 / Selection procedure of KRM..

7.4.1 KRM 齿轮减速电机 / KRM geared motors

KRM齿轮减速机是一种带有扩展输出轴承座的特种**齿轮减速机**，可用于大悬挂载荷，大轴向载荷和大变化载荷的场合。其主要性能参数同**R**系列标准**齿轮减速机**。

KRM geared motors are a special type of helical geared motor with an extended output bearing housing. They are specially designed for agitator applications and can be used in applications subject to high overhung and axial loads as well as flexural torque. The remaining data correspond to the standard helical geared motors.



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7.4.2 許用徑向和軸向載荷 / Permitted overhung and axial loads

根據不同的服務系數 f_B 和不同的標稱軸承使用壽命 L_{H10} 提供下述的許用徑向載荷 F_{Ra} 和軸向載荷 F_{Aa}

The permitted overhung loads F_{Ra} and axial loads F_{Aa} are specified for various service factors f_B and nominal bearing service life L_{H10}

$$f_A = 1.5 / L_{H10} = 10000h$$

		na[rpm]							
		<16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
KRM57	$F_{Ra}[N]$	400	400	400	400	400	405	410	415
	$F_{Aa}[N]$	18800	15000	11500	9700	7100	5650	4450	3800
KRM67	$F_{Ra}[N]$	575	575	575	580	575	585	590	600
	$F_{Aa}[N]$	19000	18900	15300	11900	9210	7470	5870	5050
KRM77	$F_{Ra}[N]$	1200	1200	1200	1200	1200	1210	1210	1220
	$F_{Aa}[N]$	22000	22000	19400	15100	11400	9220	7200	6710
KRM87	$F_{Ra}[N]$	1970	1970	1970	1970	1980	1990	2000	2010
	$F_{Aa}[N]$	30000	30000	23600	18000	14300	11000	8940	8030
KRM97	$F_{Ra}[N]$	2980	2980	2990	3010	3050	3060	3060	3080
	$F_{Aa}[N]$	40000	36100	27300	20300	15900	12600	9640	7810
KRM107	$F_{Ra}[N]$	4230	4230	4230	4230	4230	4230	3580	3580
	$F_{Aa}[N]$	48000	41000	30300	23000	18000	13100	9550	9030
KRM137	$F_{Ra}[N]$	8710	8710	8710	8710	7220	5060	3980	6750
	$F_{Aa}[N]$	70000	70000	70000	57600	46900	44000	35600	32400
KRM147	$F_{Ra}[N]$	11100	11100	11100	11100	10600	10600	8640	10800
	$F_{Aa}[N]$	70000	70000	69700	58400	45600	38000	32800	30800
KRM167	$F_{Ra}[N]$	14600	14600	14600	14600	14600	14700	—	—
	$F_{Aa}[N]$	70000	70000	70000	60300	45300	36900	—	—

$$f_A = 2.0 / L_{H10} = 25000h$$

		na[rpm]							
		<16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
KRM57	$F_{Ra}[N]$	410	410	410	410	410	415	415	420
	$F_{Aa}[N]$	12100	9600	7350	6050	4300	3350	2600	2200
KRM67	$F_{Ra}[N]$	590	590	590	595	590	595	600	605
	$F_{Aa}[N]$	15800	12000	9580	7330	5580	4460	3460	2930
KRM77	$F_{Ra}[N]$	1210	1210	1210	1210	1210	1220	1220	1220
	$F_{Aa}[N]$	20000	15400	11900	9070	6670	5280	4010	3700
KRM87	$F_{Ra}[N]$	2000	2000	2000	2000	2000	1720	1690	1710
	$F_{Aa}[N]$	24600	19200	14300	10600	8190	6100	5490	4860
KRM97	$F_{Ra}[N]$	3040	3040	3040	3050	3070	3080	2540	2430
	$F_{Aa}[N]$	28400	22000	16200	11600	8850	6840	5830	4760
KRM107	$F_{Ra}[N]$	4330	4330	4330	4330	4330	4230	3580	3580
	$F_{Aa}[N]$	32300	24800	17800	13000	9780	8170	5950	5620
KRM137	$F_{Ra}[N]$	8850	8850	8850	8830	5660	4020	3200	5240

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		na[rpm]							
		<16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
KRM147	F _{Aa} [N]	70000	59900	48000	37900	33800	31700	25600	23300
	F _{RA} [N]	11400	11400	11400	11400	11400	8320	6850	8440
	F _{Aa} [N]	70000	60600	45900	39900	33500	27900	24100	22600
KRM167	F _{RA} [N]	15100	15100	15100	15100	15100	13100	—	—
	F _{Aa} [N]	70000	63500	51600	37800	26800	23600	—	—

7. 4. 3 转换系数和齿轮箱常数 / Conversion factors and gear unit constants

计算KRM齿轮减速电机额定径向载荷FXL(X≠1000mm)的转换系数

The following conversion factors and gear unit constants apply to calculating the approved overhung load FXL at point x≠1000 mm for KRM geared motors:

齿轮箱型号 Gear unit type	a	b	C _F (F _B =1.5)	C _F (F _B =2.0)	F _F
KRM57	1047	47	1220600	1260400	277
KRM67	1047	47	2047600	2100000	297.5
KRM77	1050	50	2512800	2574700	340.5
KRM87	1056.5	56.5	4917800	5029000	414
KRM97	1061	61	10911600	11124100	481
KRM107	1069	69	15367000	15652000	554.5
KRM137	1088	88	25291700	25993600	650
KRM147	1091	91	30038700	31173900	756
KRM167	1089.5	89.5	42096100	43654300	869

KRM减速箱的增加重量 / Additional Weights of KRM gear units

型号 Type	用KRF系列最小的法兰所增加的重量表 Additional weight in addition to RF, related to the smallest KRF flange	△m[kg]
KRM57	12.0	
KRM67	15.8	
KRM77	25.0	
KRM87	29.7	
KRM97	51.3	
KRM107	88.0	
KRM137	111.1	
KRM147	167.4	
KRM167	195.4	

8. 存放与维护 / Storage And Maintenance

8.1 存放 / Storage

- (1) 减速机应存放在防雨雪、无震动、温度和湿度无骤然变化、无污染和粉尘、无腐蚀性蒸汽的环境中。
 - (2) 减速机与地面之间应放置合适的间隔材料。
 - (3) 开箱后暂不使用的减速机，应在各加工面上涂防锈油，并及时放回包装箱内。
1. Under roof, protected against rain and snow, no shock loads, Temperature and humidity without sudden change, no pollution and dust, no corrosive vapor environment.
 2. Underlay the block and other material between the ground and equipment
 3. The opened but not used gear units should be added with the anti-corrosive oil on its surface and then return to the packing containers timely.

8.2 维护 / Maintenance

注意：在对减速机进行检查或维护前，请务必切断减速机驱动电机的电源，防止触电！等待减速机冷却！

Attention: Before inspection or maintenance, please be sure to cut off the reducer drive motor power, prevent electric shock! And wait until the reducer cooled down.

- (1) 首次换油应在减速机工作300小时后进行。换油时须用合适的清洁剂冲洗齿轮箱，不得将合成油与矿物油混合。
 - (2) 每隔6个月或工作3000小时后，检查润滑油及油位。当采用 AM 输入时，还应检查弹性体，必要时进行更换。
 - (3) 如果减速机加注了矿物润滑油，应根据油池稳态温度的不同，最长三年检查一次润滑油的品质是否改变。
 - (4) 如果减速机加注了合成润滑油，应根据油池稳态温度的不同，最长五年检查一次润滑油的品质是否改变。
 - (5) 根据减速机工作环境的不同，更换输出轴上的油封。
 - (6) 产品出现故障时，不要拆卸部件，与本公司售后服务部门联系（需提供减速机规格、铭牌编号、已使用时间，和故障类型）后再采取合理的措施。
1. For gear units, first oil change should be after about 300 hours (run-in-period). The right lotion is required to clean the gear units with care. Never mix the synthetic oil and mineral oil together.
 2. Every 3000 working time or six months, you have to check the oil and oil level. For AM input gear units, the elastomer should be tested or replaced if necessary.
 3. For mineral oil, at least every 3 years inspection is needed. Then change the mineral oil and replace the bearing grease.
 4. For Synthetic oil, at least every 5 years inspection is needed. Then change the synthetic oil and replace the bearing grease.
 5. Depending on the operating conditions, change the Oil seal on output shaft.
 6. Once the malfunctions appear, stop disassembling The parts, and firstly please contact the customer service (the information about specification, series number, time used and malfunction problem), then take the reasonable measures.

9. 訂貨需知 / Notice For Order

訂購減速機時請提供以下信息：

- (1) 減速機型號（傳動比、輸入配置、輸出配置、功率和安裝方式）。
- (2) 訂購數量。
- (3) 其他特殊要求。
- (4) 單位名稱、聯系人、聯系電話。

Please provide the following information when place the orders:

1. The model mark of the gear reduction motor (type, Ratio, power and mount).
2. Quantity.
3. Other special requirements.
4. company, contact and telephone.

10. 故障及排除 / Malfunction and Remedy

故障	可能的原因	解決辦法
異常、均勻的運轉噪聲。	1. 滾動/碾壓噪聲：軸承損壞。 2. 沖擊型噪聲：齒輪啮合不均勻。	1. 檢查潤滑油，更換軸承。 2. 請向客戶服務部諮詢。
異常、不均勻的運轉噪聲。	潤滑油中有異物。	1. 停機向客戶服務部諮詢。 2. 檢查潤滑油。
機油泄漏 * 1. 在減速機蓋板上。 2. 在電機法蘭上。 3. 在電機軸密封圈上。 4. 在減速器法蘭上。 5. 在輸出軸密封圈上。	1. 減速機密封墊發生泄漏。 2. 軸上的油封損壞。 3. 減速機沒有排氣。	1. 在密封墊上塗密封膠並拧紧螺栓。 2. 更換油封。 3. 給減速機排氣（參見“安裝方式”）。
機油從排氣閥旁滲出	1. 機油太多。 2. 傳動裝置安裝方式錯誤。 3. 頻繁冷起動（潤滑油起泡沫）。	1. 修正油量（參見“潤滑油”）。 2. 正確安裝排氣閥並且修正油位（參見“安裝方式”）。
減速機輸入端驅動正常，但是輸出軸不轉動。	減速機中的軸與輪殼聯接失效。	請向客戶服務部諮詢。
AM (IEC) 連接器彈性體過早磨損或失效	1. 接觸腐蝕性物質（液體或氣體）。 2. 過高的環境溫度。最大的環境溫度允許 -20℃ 到 +80℃。 3. 過大的負載。	請向客戶服務部諮詢。

*：在磨合試運轉階段（24小時的運轉時間內），軸密封圈有可能出現短暫、少量的滲油現象。

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Problem	Possible Cause	Remedy
Unusual, regular running noise.	1. Meshing/grinding noise; Bearing damage. 2. Knocking noise; Irregularity in the gearings.	1. Check the oil, change bearings. 2. Contact customer service.
Unusual, irregular running noise.	Foreign bodies in the oil.	1. Check the oil. 2. Stop the drive and contact customer service.
Oil leaking: 1. from the gear cover plate. 2. from the motor flange. 3. from the motor oil seal. 4. from the gear unit flange. 5. from the output end oil seal.	1. Rubber seal on the gear cover leaking. 2. Seal defective. 3. Gear unit not vented.	1. Tighten the bolts on the gear cover plate and observe the gear unit. 2. Change the seals. 3. Vent the gear unit (see "Mounting Positions"). 4. Contact customer service.
Oil leaking from breathing valve.	1. Too much oil. 2. Drive operated in incorrect mounting position. 3. Frequent cold starts (oil foams) and/or high oil level.	1. Correct the oil level (see sec. "inspection and maintenance"). 2. Mount the breather valve correctly (see sec. "Mounting Positions") and correct the oil level (see "Lubricants").
Output shaft does not turn although the motor is running or the input shaft is rotated.	Connection between shaft and hub in gear unit interrupted.	Contact customer service.
Premature wear or failure in AM(IEC) coupling elastomer.	1. Contacted with aggressive fluids/oil; 2. Impermissibly high ambient/contact temperature. Maximum permitted temperature -20°C to +80°C.	Contact customer service.

Note: Short-term oil/grease leakage at the oil seal is possible in the run-in phase (24 hour running time).

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C E 認 證 取 得
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R O H S 認 證 取 得
CERTIFICATE OF APPROVAL RoHS



I S O 9 0 0 1 認 證 取 得
CERTIFICATE OF APPROVAL ISO9001

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