研发 领先的研发能力

品质 优越的品质保障能力

制造 先进的制造能力

服务 快速的服务能力

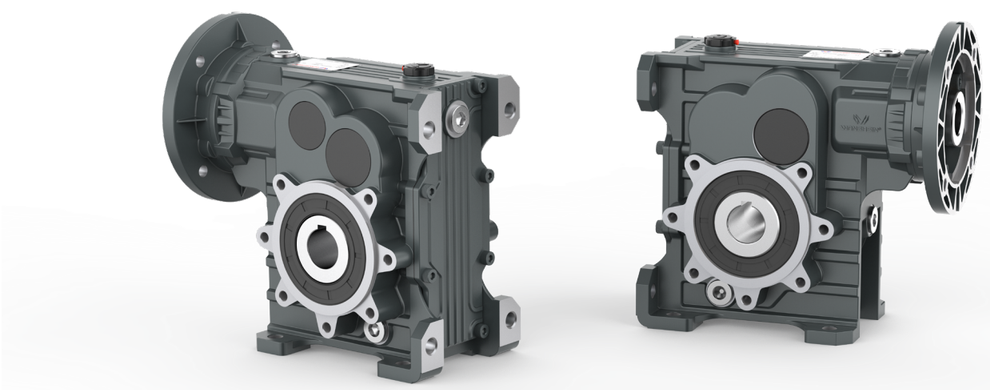
WANSHIN® 萬鑫精工

WKM 准双曲面减速机

WKM SERIES HELICAL-HYPOID GEAR UNITS

CE CCC TX

WANSHIN®



万鑫精工（湖南）股份有限公司
WANSHSIN SEIKOU(HUNAN)CO.,LTD

企业官网：ww.wanshsin.com.cn
生产基地：湖南省长沙市宁乡高新区万鑫精工产业园

官微二维码

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致力于打造世界一流的智能机电品牌

Committed To Building A World-class Intelligent Electromechanical Brand

万鑫精工(湖南)股份有限公司

WANSHSIN SEIKOU(HUNAN)CO., LTD.

专业化减速机 / 减速电机 / 变频器制造商

智能自动化全套方案提供商

SPECIALIZED REDUCER / REDUCTION MOTOR / INVERTER MANUFACTURER
INTELLIGENT AUTOMATION SOLUTION PROVIDER

致力于打造不漏油的减速机

COMMITTED TO BUILDING A NO-LEAKAGE GEARBOX

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ABOUT WANSHSIN

关于万鑫

万鑫精工（湖南）股份有限公司

WANSHSIN SEIKOU (HUNAN) CO., LTD.

万鑫精工，2009年创始于广东东莞，2014年总部搬迁至湖南长沙。目前在宁乡高新区、长沙高新区拥有两个生产基地，创新引领行业高质量发展。

万鑫精工，是集研发、生产、销售、服务于一体的专业化减速机、减速电机、变频器制造商及智能自动化全套方案提供商，产品覆盖轻工、重工以及精密工业，已广泛应用于新能源、机器人、3C、半导体、智能仓储、线体物流、工程机械、化工冶金等行业领域。万鑫精工已逐步成为行业内各大龙头企业的长期合作伙伴。

万鑫精工秉持“致力于打造世界一流的智能机电品牌”的企业愿景，立志走“精鑫”强企强国之路，以“专业化、品牌化、国际化”为目标，笃志躬行为全球客户提供技术前沿、品质卓越、制造前进、服务快速的各类传动产品，向着推动世界工业智能化发展不懈奋斗！

WANSHSIN was Founded in 2009 in Dongguan, Guangdong province, relocated its headquarters to Changsha, Hunan in 2014. Now WANSHSIN operates two production bases in Ningxiang High-Tech Zone and Changsha High-Tech Zone, driving high-quality development in the industry through innovation.

WANSHSIN is a professional manufacturer of gearboxes, gearmotors, controllers, and intelligent automation solution provider, integrating R&D, production, sales, and service, its products cover light and heavy industry, and has been widely used in industries such as new energy, robotics, automation, construction machinery, smart warehousing, logistics, food processing etc. WANSHSIN has gradually become a long-term partner for major leading enterprises in the industry.

WANSHSIN adheres to the corporate vision of "committed to building a world-class intelligent electromechanical brand", with the goal of "specialization, branding, and internationalization". WANSHSIN provides various transmission products with cutting-edge technology, exceptional quality, advanced manufacturing, and fast service to global customers, and relentlessly advancing the intelligent development of global industry.

CORE COMPETITIVENESS

核心竞争力

01

研发领先 Leading R&D

公司拥有三大研发中心，近百人专家团队及国内外先进设备，同时从日本聘请多名齿轮减速领域技术骨干，与顶尖高校深度产学研合作，依托多项国家、省、市级项目与研发专利，构建了引领行业前沿的多层次研发创新体系。

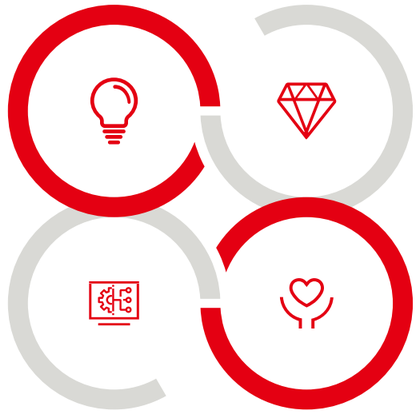
The company operates three R&D centers with a team of nearly 100 experts and advanced domestic and international equipment. We have also recruited several technical leaders in gear reduction from Japan and collaborate closely with top universities. Supported by multiple national, provincial, and municipal projects and patents, we have built a multi-level R&D innovation system that leads the industry.

02

品质保障 Quality Assurance

公司建立了贯穿“供应商-研发-生产-客户”的全链质量管理体系，通过多项国际体系认证，并在来料、过程、出货全环节配置国际先进检测设备，实现产品品质的精准控制与可靠交付。

We implement an end-to-end quality management system across "suppliers-R&D-production-customers". Certified by multiple international standards, and equipped with advanced inspection tools throughout incoming materials, production, and shipment stages, we ensure precise quality control and reliable delivery.



03

智能机电全谱系产品供给 Full Range of Smart Electromechanical Products

公司具备覆盖产品全周期的快速开发与深度定制能力，机电控一体化解决方案能力达全球领先水准。

The company offers rapid development and deep customization capabilities covering the entire product lifecycle. Our integration of motor, drive, and control solutions ranks among the world's leading levels.

04

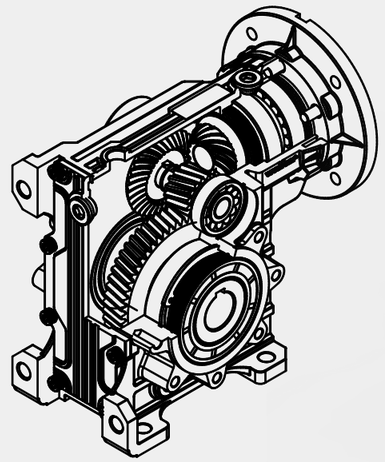
服务高效 Efficient Service

自建仓储系统，仓储库存足;交付周期短，常规产品、非标产品快速交付；配置国内多家TOP级物流商；售后响应速度快。

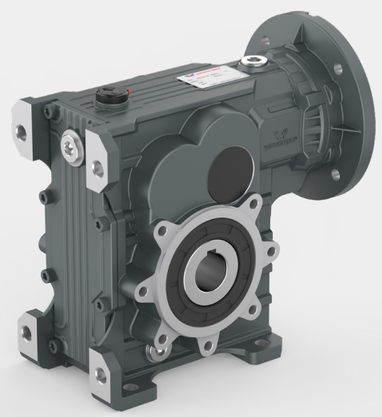
We operate our own well-stocked warehouse system, enabling short lead times for both standard and custom products. Partnered with top domestic logistics providers, we ensure fast delivery and responsive after-sales support.

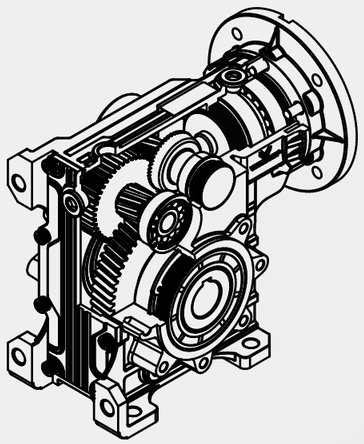
PRODUCT OVERVIEW

产品概述

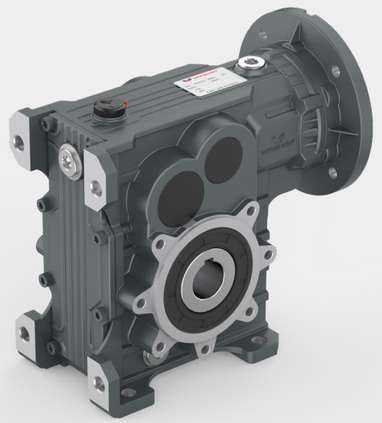


WKM050-090（i=7.5~40）





WKM050-090（i=60~200）



■ 产品特点 Product Features

1、WKM系列斜齿-准双曲面齿轮减速器是我司的新一代实用型产品。该系列产品汇聚了国内外先进技术精华，具备以下突出优势：

1）搭载自主研发的准双曲面齿轮传动结构，实现较大传动比；
2）输出扭矩大，传动效率高，节能环保；
3）采用高品质铝合金一次性压铸成型，兼具高刚性和优异防腐性能；
4）运行平稳，噪声低，可长期在恶劣工况下连续作业；
5）外观精美，结构紧凑，有效提升空间利用率；
6）支持全向安装，适用范围广，安装便捷；

2、WKM系列减速器的安装尺寸与NWRV系列蜗轮蜗杆减速器可进行无缝对接；

3、采用模块化设计，可实现多种组合方式，灵活适应各类传动需求。

1. The WKM series spiral bevel-hypoid gear reducer is our new generation of practical products. Incorporating advanced domestic and international technologies, this series offers the following outstanding advantages:

1.1 Equipped with a self-developed hypoid gear transmission structure, achieving a large transmission ratio.
1.2 High output torque, high transmission efficiency, energy saving and environmentally friendly.
1.3 Made of high-quality aluminum alloy through one-time die-casting, combining high rigidity and excellent corrosion resistance.
1.4 Stable operation, low noise, capable of continuous work under harsh conditions.
1.5 Sleek appearance, compact structure, effectively improving space utilization.
1.6 Supports full-direction installation, wide application range, easy to install.

2. The installation dimensions of the WKM series reducer are fully compatible with the WXMRW series worm gear reducer, allowing for seamless replacement.

3.Featuring a modular design, it supports multiple configuration options to flexibly meet diverse transmission needs.

■ 主要材料 Main Materials

1、外壳：铝合金（机座：050-090）；

2、齿轮：采用20CrMnTi—碳氮共渗处理（精磨后保持齿面硬度在HRC58-62,硬化层深>0.5mm）；

1. Housing: Aluminum alloy (frame sizes: 050-090).

2. Gears: Made of 20CrMnTi, treated with carbonitriding (tooth surface hardness maintained at HRC 58-62 after fine grinding, hardened layer depth >0.5 mm).

■ 表面涂装 Surface Finish

1、先抛丸处理，再经过特种防腐及喷塑处理，保持银白色金属感；并耐汽油、二甲苯等有机溶剂的腐蚀；

2、可选颜色万鑫灰和银灰色。

1. Shot blasting followed by special anti-corrosion and powder coating, retaining a metallic silver-gray appearance; resistant to corrosion from gasoline, xylene, and other organic solvents.

2. Optional colors: WANSHSIN Gray and Off-White.

■ 型号说明 Model Designation

WKM	063	B	T	40	S	FA	A	SS1	71B5	B3	WSS0.75KW-4	1
1	2	3	4	5	6	7	8	9	10	11	12	13

1 减速机系列代号 Gearbox Mode: WKM

2 减速机规格代号 Gearbox Size: WKM 050/063/075/090

3 B: 二级传动 Indicates two-stage transmission,
C: 三级传动 Indicates three-stage transmission.

4 无代号: 标配轴承 Blank: Standard bearings
T: 高刚性轴承 T: High-stiffness bearings.

5 减速机速比 Gear ratio i

6 无代号: 配国标电机B5/B14法兰 Blank: With B5/B14 input flange
S: 配伺服法兰 Servo flange

7 无代号: 不带输出法兰 Blank: Without output flange
F(A)、FB、FC(1/2): 输出法兰号和位置 Output flange type and position.

8 无代号: 无扭力臂 Blank: Without torque arm
A(1/2): 扭力臂的位置 Torque arm position

9 无代号: 孔输出 Blank: Hollow shaft output
SS(1/2): 单向输出轴和位置 Single output shaft and position
DS: 双向输出轴 Double output shaft

10 输入法兰规格代号 Input flange (63B5、71B5.....)

11 安装方位代号 Mounting position (B3/B6/B7/V5/V6)

12 1) 无代号: 不带电机 Blank: Without motor
2) 电机型号或功率级数 Motor model or power rating

13 接线盒位置 Terminal box position: 1、2、3、4 (默认位置1可以不写) ;
(Position 1 is default and may be omitted).
出线方向: X、F Cable exit direction: X, F.

RELEVANT PARAMETER

选型相关参数

■ 功率 Power (P)

$$P_1 = \frac{P_2}{\eta}\ (kW) \qquad P_{1n} \geq P_1 \cdot fs\ (kW)$$

P_1 输入功率 Input power
P_2 输出功率 Output power
P_{1n} 电机额定功率 Rated power driving motor
fs 服务系数 Service factor
η 传动效率 Transmission efficiency

WKM 系列减速器的效率是根据传动级数确定，2级传动效率η为94%，3 级传动效率η为 92%。

For WKM series reducers: 94% for 2-stage transmission, 92% for 3-stage transmission, as specified in the performance parameter table.

■ 转速 Rotation Speed (n)

n_1 减速器输入转速 Input speed of the reducer
n_2 减速器输出转速 Output speed of the reducer

若是齿轮箱外部传动装置驱动，为了优化工作条件和提高使用寿命：建议使用 1400r/min 或更低转速。允许输入较高的输入转速，但在这种情况下，额定扭矩 M_2 会下降。

The rated input speed of the reducer is designed based on the rated speed of the drive motor. To optimize operating conditions and extend service life, it is recommended to use an input speed of 1400 r/min or lower. While higher input speeds are permissible, the rated torque M2 will decrease in such cases.

■ 传动比 Transmission Ratio (i)

$$i = \frac{n_1}{n_2}$$

传动比通常为小数，在选型表中保留两位小数。

The transmission ratio is expressed as a decimal, and 2 decimal places shall be retained when selecting the corresponding value from the model selection table.

■ 扭矩 Torque (M)

$$M_2 = \frac{9550 \cdot p_1 \cdot \eta}{n_2}\ (Nm) \qquad M_{2n} \geq M_2 \cdot fs\ (Nm)$$

M_2 选用输出扭矩 Actual required torque
M2n 输入功率 Rated output speed
P_1 输入功率 Input power
η 传动效率 Transmission efficiency
fs 使用系数 Service factor

■ 服务系数 Service Factor (fs)

使用减速器时，应考虑一定的服务系数fs，它是根据每天的运转时间和启停频率Z确定的。

根据惯性加速系数确定三种负载类型，在下图中可以读取实际应用的服务系数，按下图选取的服务系数必须小于或等于从性能参数表中提供的服务系数。

A service factor is required for reducer selection, determined by daily operating time and start-stop frequency.

Three load types correspond to the mass acceleration factor. Derive the required service factor from the graph below, and ensure it is ≤ the service factor in the performance parameter table.

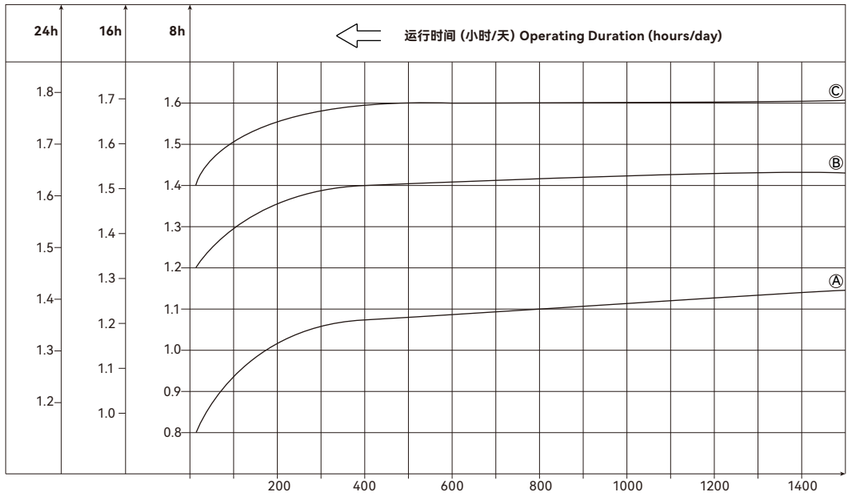


图: 使用系数 (fs)
Graph: Service Factor (fs)

启动频率 Z (次/小时)#
Start-Stop Frequency
(Z, starts/hour)

启动频率 Z: 周期包括所有启动、制动的次数以及变速电机高低速变化时的次数。
#Start-Stop Frequency (Z): The cycle includes the total number of starts, stops, and speed changes (high/low) of the variable-speed motor.

■ 负载类型 Load Classifications

A. 均匀冲击负载，允许惯性加速系数 fa≤0.2
B. 中等冲击负载，允许惯性加速系数 fa≤3
C. 重冲击负载，允许惯性加速系数 fa≤10

A. Uniform load, allowable mass acceleration factor fa≤0.2
B. Medium impact load), allowable mass acceleration factor fa≤3
C. Heavy impact load, allowable mass acceleration factor fa≤10

负载类型:

· 轻负载的螺杆输送, 风扇, 装备线, 输送带, 小型搅拌器, 电梯, 清洗机器, 过滤器, 控制驱动。

· 卷扬机, 木工机器进料器, 货物起重机, 平衡器, 绞螺纹机器, 中型搅拌器, 重型输送带, 绞盘, 滑动闸门, 刮料机, 包装机械, 混凝土搅拌机, 行车驱动装置, 铣床, 齿轮泵。

· 大型搅拌器, 剪床, 压机, 离心机, 旋转支撑装置, 重型绞盘和起重机, 磨床, 石材打磨机, 翻斗机, 钻床, 冲床, 凸轴压机, 摺床, 机床转盘, 翻桶装置, 振荡装置, 破碎机。

Load Examples:

· Light-load applications: Screw conveyors, fans, assembly lines, conveyor belts, small mixers, elevators, cleaning machines, filters, control drives.

· Medium-load applications: Winches, woodworking machine feeders, cargo cranes, balancers, threading machines, medium mixers, heavy-duty conveyor belts, capstans, sliding gates, scrapers, packaging machinery, concrete mixers, crane drives, milling machines, gear pumps.

· Heavy-load applications: Large mixers, shearing machines, presses, centrifuges, slewing bearings, heavy-duty winches & cranes, grinding machines, stone polishers, tippers, drilling machines, punching machines, cam presses, folding machines, machine tool turntables, drum tilters, oscillating devices, crushers.

■ 惯性加速系数 Mass Acceleration Factor

惯性加速系数计算如下 The inertial acceleration coefficient is calculated as follows:

$$f_a = \frac{J_c}{J_m}$$

fa 惯性加速系数 Inertial acceleration coefficient

Jc 所有外部传动惯量 (kgm2) All external transmission inertia (kgm2)

Jm 驱动电机的传动惯量 (kgm2) The transmission inertia of the drive motor (kgm2)

如果惯性加速系数 f_a>10, 请与我们技术部联系。

为了保持减速器的使用寿命, 从产品样本中的性能参数表所选择的服务系数 fs 应等于或略高于计算出的服务系数 fs。

举例: 惯性加速系数2.5(负载类型 B), 运行时间14小时/天, (按16小时/天查图)和每小时 200 次起停, 查图得服务系数fs =1.48。根据性能参数表所选择的服务系数 fs≥1.48。

If the inertial acceleration factor f_a>10, please contact our Technical Department..

To maintain the service life of the reducer, the service factor fs, selected from the performance parameter table in the product catalog should be equal to or slightly higher than the calculated service factor fs.

Example: Inertial acceleration coefficient = 2.5 (Load Type B), operating time = 14 hours/day (refer to the chart for 16 hours/day), start-stop frequency = 200 cycles/hour. From the chart, the derived service factor fs=1.48, the selected service factor from the performance parameter table must satisfy fs≥1.48.

■ 径向载荷和轴向载荷 Radial loads and axial forces

在确定影响径向载荷时, 必须考虑安装在轴端上的传动件类型。不同类型的传动件的传动附加系数fz, 列表如下:

When determining the effective radial load, the type of drive component mounted on the shaft end must be considered. The drive factor fZ, for different types of drive components is listed below:

传动件 Drive Component	传动附加系数Drive Factor Fz	注释 Remarks
齿轮 Gear	1.15	<17 齿 teeth
链轮 Sprocket	1.25	<20 齿 teeth
链轮 Sprocket	1.4	<13 齿 teeth
V带轮 V-Belt Pulley	1.75	有预紧力作用 With pre-tension force
平带轮 Flat Belt Pulley	2.50	有预紧力作用 With pre-tension force
齿带轮 Toothed Belt Pulley	2.50	有预紧力作用 With pre-tension force

作用在电机和齿轮轴上的径向载荷按如下公式计算

The radial load acting on the motor and gear shafts is calculated as follows

$$F_r = \frac{M \cdot 2000 \cdot f_z}{d_0} \text{ (N)}$$

· Fr 作用在轴上的载荷 Load acting on the shaft [N]

· M 作用在轴上的扭矩 Torque acting on the shaft [Nm]

· d_0 安装在轴上传动件的平均直径 Mean diameter of the drive component mounted on the shaft[mm]

· fZ 传动附加系数 Drive factor

许用径向载荷是根据轴承额定使用寿命 L_{10h} 来估算的 (根据ISO281)。对于特殊的运行条件, 许用径向载荷是根据修正使用寿命 L_{na}来确定。

当作用点偏离出轴中点时, 许用径向载荷须按以下公式来计算, 取在X点的许可数值 F_{XL} (根据轴承的使用寿命)。

The permissible radial load is estimated based on the bearing rating life L10h (according toISO281). Under specific operating conditions, the permissible radial load is determined based on the modified rating life Lna.

When the point of load application deviates from the shaft midpoint, the permissible radial load shall be calculated using the formula below, determining the allowable value FXL at point X (according to the bearing rating life).

根据轴承的使用寿命公式 Based on the bearing rating life formula::

$$F_{XL} = F_{r(1,2)} \cdot \frac{a}{b+x} \text{ (N)}$$

Fr1,Fr2 = 性能参数表中的许用径向载荷 (X=L/2)[N]
Permissible radial load from the performance parameter table (X=L/2)[N]

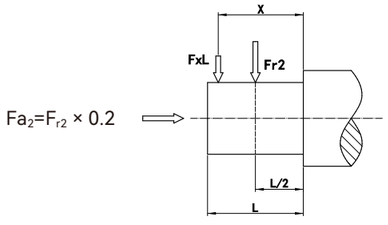
X =从轴肩到受力点的距离 Distance from the shaft shoulder to the load application point[mm]

a,b, =减速器径向转化常量 Gearbox radial conversion constants [mm]

■ 输出轴径向载荷 Output shafts radial loads

Fa_2 =输出轴向载荷
Output axial load

$$F_{rx} = F_r \cdot \frac{a}{b+x}$$



$Fa_2 = F_{r2} \times 0.2$

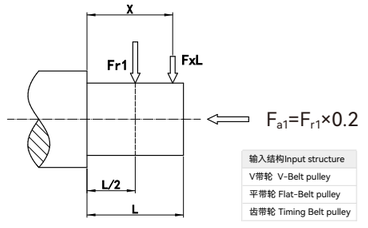
WKM 减速器径向转化常量
WKM Gearbox Radial Conversion Constants

Item	WKM050B	WKM050C	WKM063B	WKM063C	WKM075B	WKM075C	WKM090B	WKM090C
a	104	104	118	118	131	131	159	159
b	78	78	93	93	101	101	119	119

■ 输入轴径向载荷 Input shafts radial loads

Fa1 =输入轴向载荷 Input axial load

右示图的输入不被允许使用(包括三级输入) The input configuration shown on the right is not permitted (including three-stage input)



$F_{a1} = F_{r1} \times 0.2$

输入结构Input structure
V带轮 V-Belt pulley
平带轮 Flat-Belt pulley
齿带轮 Timing Belt pulley

WKM 减速器径向转化常量
WKM Gearbox Radial Conversion Constants

Item	WKM050B	WKM050C	WKM063B	WKM063C	WKM075B	WKM075C	WKM090B	WKM090C
a	51.5	56	58	56	73	70	81	70
b	40	44.5	43	44.5	53	55	61	55

■ 选型表注释 Selection tables comments

■	表示电机与减速器的组合是可行的	Feasible motor-gearbox combination.
□	表示电机与减速器的组合是不可行的	Not feasible motor-gearbox combination.
*	表示速比可除尽	Divisible speed ratio.
P_{1n}	电机额定功率	Motor rated power (kW)

n_2	输出转速	Output speed (r/min)
M_{2n}	输出扭矩	Output torque (Nm)
M_{2max}	最大允许输出扭矩	Max permissible output torque (Nm)
F_{r2}	输出轴径向载荷	Output shaft radial load (N)
i	减速器公称传动比	Nominal gear ratio
i_a	减速器实际传动比	Actual gear ratio
fs	服务系数	Service factor
	减速器型号	Gearbox model
	电机型号	Motor model

■ 选型举例 Selection Example

■ 减速电机 Gear Motor

例: 被驱动设备所需功率0.25kW, 工作8小时/天, 中等冲击, 启动频率100 次/小时, 输出转速 n_2=35/min,减速机要求B3安装, 则: 查服务系数图表即可选服务系数 fs=1.3

Example: Driven equipment requires 0.25kW, 8 h/day operation, medium shock, 100 starts/h, output speed n_2=35/min, B3 mount. Service factor fs=1.3

$$i = \frac{n_1}{n_2} = \frac{1400}{35} = 40$$

$$P_{1n} \geq P_1 \cdot fs = \frac{P_2}{\eta} \cdot fs = \frac{0.25}{0.94} \times 1.3 = 0.345\ (kW)$$

查 WKM../WKB..系列性能参数表可确定减速电机型号为:
From WKM../WKB.. performance table

WKM050B-40-71B5-B3-WSS0.37KW-4

■ 减速器 Gear Units

例: 被驱动设备所需扭矩为200Nm, 工作8小时/天, 均匀冲击负载, 启动频率400次/小时, 减速机要求FA1法兰安装, 减速器要求输入转速900r/min, 输出转速n_2=6r/min, 查性能参数表可知, 只选能三级传动形式。

查服务系数图表即可选服务系数 fs=1.05

Example: Driven equipment requires 200 Nm, 8 h/day, uniform shock, 400 starts/h, FA1 flange mount, input speed 900 r/min, output speed n_2=6r/min, requires three-stage transmission.
Service factor fs=1.05

$$i = \frac{n_1}{n_2} = \frac{900}{6} = 150$$

$$M_{2n} \geq M_2 \cdot fs = 200 \times 1.05 = 210\ (Nm)$$

$$P_{1n} \geq P_1 \cdot fs = \frac{M_2 \cdot n_1}{9550 \cdot \eta \cdot i} \cdot fs = \frac{210 \times 900}{9550 \times 0.92 \times 150} \times 1.05 = 0.151\ (kW)$$

查 WKM /WKB 系列性能参数表可确定减速器型号为:
From WKM/WKB performance table

WKM075C-151.20-FA

■ 减速器选型表 Gear Unit Selection Tables

WKM050... n=1400r/min 允许最大负荷 Allowable Maximum Load 162Nm

减速器型号 Gearbox Model	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3级/3Stage									
WKM050C	200	198.17	7.06	162.2	4100	■			
	160	153.75	9.11	125.85	4000	■			
	120	123.25	11.36	100.88	3770	■			
	100	95.63	14.64	117.41	4280	■			
	80	79.69	17.57	97.84	3973	■			
	60	58.85	23.79	100.35	3610	■	■		
	50	49.04	28.55	83.62	3397	■	■		
2级/2Stage									
WKM050B	40	39.77	35.2	100.37	3153	■	■		
	30	30.86	45.37	77.88	2865	■	■		
	25	24.65	56.8	62.21	2696	■	■		
	20	19.13	73.2	71.75	2503	■	■	■	
	15	15.94	87.84	59.79	2274	■	■	■	
	12.5	12.76	109.72	47.87	2131	■	■	■	
	10	9.90	141.41	37.14	1987	■	■	■	
	7.5	8.25	169.7	30.95	1805	■	■	■	

■ 推荐配置
Recommended Configuration

WKM063... n=1400r/min 允许最大负荷 Allowable Maximum Load 210Nm

减速器型号 Gearbox Model	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3级/3Stage									
WKM063C	200	198.17	7.06	162.20	4800	■			
	160	156.60	8.94	128.18	4650	■			
	120	123.25	11.36	210.17	4330	■			
	100	97.40	14.37	166.08	5595	■	■		
	80	73.56	19.03	125.43	5193	■	■		
	60	59.94	23.36	151.26	4719	■	■		
	50	45.27	30.93	114.24	4440	■	■		
2级/2Stage									
WKM063B	40	39.77	35.20	100.37	4122	■	■		
	30	31.43	44.55	79.32	2720	■	■		
	25	24.65	56.80	126.10	3524		■	■	
	20	19.48	71.87	99.65	3272		■	■	
	15	14.71	95.16	75.26	2973			■	
	12.5	12.76	109.72	95.74	2785			■	■
	10	10.08	138.84	75.66	2597			■	■
	7.5	7.62	183.84	57.14	2359			■	■

■ 推荐配置
Recommended Configuration

WKM075... n=1400r/min **允许最大负荷 Allowable Maximum Load 464Nm**

减速器型号 Gearbox Model	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3级/3Stage											
WKM075C	200	199.48	7.02	340.16	6500	■	■				
	160	160.00	8.75	272.84	6500	■	■				
	120	123.64	11.32	463.82	5980	■	■				
	100	99.17	14.12	372.02	6603	■	■				
	80	75.08	18.65	281.68	6130	■	■				
	60	62.55	22.38	234.66	5569		■				
	50	47.36	29.56	177.67	5217		■				
2级/2Stage											
WKM075B	40	39.90	35.09	149.67	4865		■	■			
	30	32.00	43.75	120.05	3720			■			
	25	24.73	56.62	185.53	4160			■			
	20	19.83	70.59	148.81	3862			■	■		
	15	15.02	93.23	112.67	3509			■	■		
	12.5	12.80	109.38	130.96	3287				■		
	10	10.27	136.36	105.04	3065				■		
	7.5	7.77	180.10	79.53	2330				■		

■ 推荐配置 Recommended Configuration

WKM090... n=1400r/min **允许最大负荷 Allowable Maximum Load 586Nm**

减速器型号 Gearbox Model	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3级/3Stage											
WKM090C	200	204.93	6.78	521.53	8300	■	■				
	160	164.73	8.43	419.23	8050	■	■	■			
	120	128.08	10.93	480.49	7580	■	■	■			
	100	102.96	13.60	526.69	7306		■	■			
	80	78.03	17.94	585.46	6783		■	■			
	60	63.25	22.13	474.60	6163		■	■	■		
	50	47.93	29.20	359.69	5799		■	■	■		
2级/2Stage											
WKM090B	40	40.18	34.67	413.13	5383			■	■		
	30	32.30	43.13	332.09	4891			■	■		
	25	25.11	55.75	376.86	4603			■	■	■	
	20	20.19	69.35	302.93	4273				■	■	
	15	15.30	91.50	229.59	3882				■	■	
	12.5	13.00	107.69	266.02	3637				■	■	
	10	10.45	133.97	213.84	3391				■	■	
	7.5	7.92	176.77	162.07	3081				■	■	

■ 推荐配置 Recommended Configuration

WKM .... 性能参数 Performance Specifications

P_{1n} [KW]	n_2 [r/min]	M_{2n} [Nm]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	F_{r2} [N]	fs			
0.12KW	7.06	162.20	200	198.17	4100	0.9	WKM050C	63B5	WSS0.12KW-4
	9.11	125.85	160	153.75	4000	1.2			
	11.36	100.88	120	123.25	3770	1.4			
	14.64	78.27	100	95.63	3580	1.7			
	17.57	65.23	80	79.69	3220	2.3			
	23.79	48.17	60	58.85	3030	2.6			
	28.55	40.14	50	49.04	2860	2.8			
	35.2	32.55	40	39.77	2610	4.2	WKM050B	63B5	WSS0.12KW-4
	45.37	25.26	30	30.86	2350	5.8			
	56.8	20.18	25	24.65	2200	7.0			
	73.2	15.65	20	19.13	2080	8.4			
	87.84	13.05	15	15.94	1880	11.3			
	109.72	10.44	12.5	12.76	1770	13.5			
	141.41	8.10	10	9.90	1670	16.1			
	169.7	6.75	7.5	8.25	1510	16.8			
	7.06	162.20	200	198.17	4800	1.4	WKM063C	63B5	WSS0.12KW-4
	8.94	128.18	160	156.60	4650	1.8			
	11.36	100.88	120	123.25	4330	2.2			
	14.37	79.72	100	97.40	4070	2.6			
	19.03	60.21	80	73.56	3650	2.9			
	23.36	49.06	60	59.94	3480	2.9			
	30.93	37.05	50	45.27	3270	3.0			
	35.20	32.55	40	39.77	2970	6.6	WKM063B	63B5	WSS0.12KW-4
	44.55	25.73	30	31.43	2720	8.6			
	7.02	163.28	200	199.48	6500	2.3	WKM075C	63B5	WSS0.12KW-4
	8.75	130.96	160	160.00	6500	3.1			
	11.32	101.20	120	123.64	5980	3.7			
	14.12	81.17	100	99.17	5520	3.3			
	18.65	61.46	80	75.08	5040	3.6			
	6.78	169.14	200	204.93	8300	3.3	WKM090C	63B5	WSS0.12KW-4
	8.43	135.97	160	164.73	8050	4.4			
	10.93	104.83	120	128.08	7800	5.2			
0.18KW	14.64	117.41	100	95.63	2820	2.3	WKM050C	63B5	WSS0.18KW-4
	17.57	97.84	80	79.69	2550	3.1			
	23.79	72.25	60	58.85	2400	3.4			
	28.55	60.21	50	49.04	2270	3.7			
	35.2	48.83	40	39.77	2610	2.8	WKM050B	63B5	WSS0.18KW-4
	45.37	37.89	30	30.86	2350	3.8			
	56.8	30.26	25	24.65	2200	4.7			
	73.2	23.48	20	19.13	2080	5.6			
	87.84	19.57	15	15.94	1880	7.5			
	109.72	15.67	12.5	12.76	1770	9.0			
	141.41	12.16	10	9.90	1670	10.8			
	169.7	10.13	7.5	8.25	1510	11.2			

WKM .... 性能参数 Performance Specifications

P_{1n} [KW]	n_2 [r/min]	M_{2n} [Nm]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	F_{r2} [N]	fs			
0.18KW	11.36	151.32	120	123.25	3440	2.9	WKM063C	63B5	WSS0.18KW-4
	14.37	119.58	100	97.40	3230	3.5			
	19.03	90.31	80	73.56	2900	3.9			
	23.36	73.59	60	59.94	2760	3.9			
	30.93	55.58	50	45.27	2590	4.0			
	35.20	48.83	40	39.77	2970	4.4	WKM063B	63B5	WSS0.18KW-4
	44.55	38.59	30	31.43	3150	3.7			
	7.02	244.92	200	199.48	5540	3.1	WKM075C	63B5	WSS0.18KW-4
	8.75	196.44	160	160.00	5040	3.1			
	11.32	151.80	120	123.64	5980	2.5			
	14.12	121.75	100	99.17	5520	3.1			
	18.65	92.19	80	75.08	5040	4.1			
	6.78	253.72	200	204.93	8300	2.2	WKM090C	63B5	WSS0.18KW-4
	8.43	203.95	160	164.73	8050	2.9			
	10.93	157.25	120	128.08	7580	3.5			
0.25KW	23.79	100.35	60	58.85	3030	1.2	WKM050C	71B5/B14	WSS0.25KW-4
	28.55	83.62	50	49.04	2270	2.7			
	35.2	67.82	40	39.77	2070	4.0	WKM050B	71B5/B14	WSS0.25KW-4
	45.37	52.62	30	30.86	2350	2.8			
	56.8	42.03	25	24.65	2200	3.4			
	73.2	32.61	20	19.13	2080	4.0			
	87.84	27.18	15	15.94	1880	5.4			
	109.72	21.76	12.5	12.76	2050	4.2			
	141.41	16.88	10	9.90	1930	5.0			
	169.7	14.07	7.5	8.25	1750	5.2			
	14.37	166.08	100	97.40	3230	2.5	WKM063C	71B5/B14	WSS0.25KW-4
	19.03	125.43	80	73.56	2900	2.8			
	23.36	102.2	60	59.94	2760	2.8			
	30.93	77.19	50	45.27	2590	2.9			
	35.20	67.82	40	39.77	2970	3.2	WKM063B	71B5/B14	WSS0.25KW-4
	44.55	53.59	30	31.43	2720	4.1			
	56.80	42.03	25	24.65	2930	3.3			
	71.87	33.22	20	19.48	2760	4.0			
	7.02	340.16	200	199.48	6500	1.1	WKM075C	71B5/B14	WSS0.25KW-4
	8.75	272.84	160	160.00	6500	1.5			
	11.32	210.83	120	123.64	5980	1.8			
	14.12	169.10	100	99.17	5520	2.2			
	18.65	128.03	80	75.08	5040	3.0			
	22.38	106.66	60	62.55	4730	3.6			
	29.56	80.76	50	47.36	5060	2.9			
	35.09	68.03	40	39.90	4730	2.5	WKM075B	71B5/B14	WSS0.25KW-4
	6.78	352.38	200	204.93	7030	3.2	WKM090C	71B5/B14	WSS0.25KW-4
	8.43	283.26	160	164.73	6390	4.2			

WKM .... 性能参数 Performance Specifications

P_{1n} [KW]	n_2 [r/min]	M_{2n} [Nm]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	F_{r2} [N]	fs			
0.25KW	10.93	218.41	120	128.08	7580	2.5	WKM090C	71B5/B14	WSS0.25KW-4
	13.60	175.56	100	102.96	7000	3.2			
	17.94	133.06	80	78.03	6390	4.2			
	22.13	107.86	60	63.25	6950	3.0			
	29.20	81.75	50	47.93	6420	2.9			
0.37KW	35.2	100.37	40	39.77	2070	2.7	WKM050B	71B5/B14	WSS0.37KW-4
	45.37	77.88	30	30.86	1870	3.7			
	56.8	62.21	25	24.65	2200	2.3			
	73.2	48.27	20	19.13	2080	2.7			
	87.84	40.22	15	15.94	1880	3.7			
	109.72	32.20	12.5	12.76	1770	4.4			
	141.41	24.99	10	9.90	1670	5.2			
	169.7	20.82	7.5	8.25	1510	5.5			
	23.36	151.26	60	59.94	2760	1.9	WKM063C	71B5/B14	WSS0.37KW-4
	30.93	114.24	50	45.27	2590	2.0			
	35.20	100.37	40	39.77	2350	4.3	WKM063B	71B5/B14	WSS0.37KW-4
	44.55	79.32	30	31.43	2720	2.8			
	56.80	62.21	25	24.65	2530	3.4			
	71.87	49.16	20	19.48	2380	4.2			
	11.32	312.03	120	123.64	4750	2.4	WKM075C	71B5/B14	WSS0.37KW-4
	14.12	250.27	100	99.17	4380	3.0			
	18.65	189.49	80	75.08	4000	4.0			
	22.38	157.86	60	62.55	4730	2.4			
	29.56	119.53	50	47.36	4370	3.1			
	35.09	100.69	40	39.90	4080	3.7	WKM075B	71B5/B14	WSS0.37KW-4
	6.78	521.53	200	204.93	7030	2.1	WKM090C	71B5/B14	WSS0.37KW-4
	8.43	419.23	160	164.73	6390	2.8			
	10.93	323.24	120	128.08	6010	3.4			
	13.60	259.84	100	102.96	7000	2.2			
	17.94	196.93	80	78.03	6390	2.9			
	22.13	159.64	60	63.25	6000	3.1			
	29.20	120.99	50	47.93	5540	3.1			
0.55KW	73.2	71.75	20	19.13	2080	1.8	WKM050B	80B5/B14	WSS0.55KW-4
	87.84	59.79	15	15.94	2180	1.6			
	109.72	47.87	12.5	12.76	2050	1.9			
	141.41	37.14	10	9.90	1930	2.3			
	169.7	30.95	7.5	8.25	1750	2.4			
	56.80	92.48	25	24.65	2530	2.3	WKM063B	80B5/B14	WSS0.55KW-4
	71.87	73.08	20	19.48	2760	1.8			
	95.16	55.19	15	14.71	2470	2.4			
	109.72	47.87	12.5	12.76	2360	2.4			
	138.84	37.83	10	10.08	2210	2.3			
	183.84	28.57	7.5	7.62	1990	2.4			

WKM .... 性能参数 Performance Specifications

P_{1n} [KW]	n_2 [r/min]	M_{2n} [Nm]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	F_{r2} [N]	fs			
0.55KW	35.09	149.67	40	39.90	4080	2.5	WKM075B	80B5/B14	WSS0.55KW-4
	43.75	120.05	30	32.00	3720	3.3			
	56.62	92.77	25	24.73	3500	3.9			
	70.59	74.41	20	19.83	3740	3.2			
	93.23	56.34	15	15.02	3410	4.2			
	10.93	480.49	120	128.08	6010	2.3	WKM090C	80B5/B14	WSS0.55KW-4
	13.60	386.24	100	102.96	5550	2.9			
	17.94	292.73	80	78.03	5070	3.8			
	22.13	237.30	60	63.25	4760	4.2			
	29.20	179.85	50	47.93	4390	4.1			
	34.67	151.48	40	40.18	5170	3.5	WKM090B	80B5/B14	WSS0.55KW-4
	43.13	121.77	30	32.30	5460	3.0			
	55.75	94.21	25	25.11	5130	3.6			
0.75KW	71.87	99.65	20	19.48	2380	2.1	WKM063B	80B5/B14	WSS0.75KW-4
	95.16	75.26	15	14.71	2130	2.7			
	109.72	65.28	12.5	12.76	2030	2.7			
	138.84	51.58	10	10.08	1910	2.7			
	183.84	38.96	7.5	7.62	1710	2.7			
	56.62	126.50	25	24.73	3600	2.9	WKM075B	80B5/B14	WSS0.75KW-4
	70.59	101.46	20	19.83	3230	3.7			
	93.23	76.82	15	15.02	3410	3.1			
	13.60	526.69	100	102.96	5550	2.1	WKM090C	80B5/B14	WSS0.75KW-4
	17.94	399.18	80	78.03	5070	2.8			
	22.13	323.59	60	63.25	4760	3.1			
	29.20	245.25	50	47.93	4390	3.0			
	34.67	206.57	40	40.18	5170	2.6	WKM090B	80B5/B14	WSS0.75KW-4
	43.13	166.05	30	32.30	4710	3.4			
	55.75	128.47	25	25.11	4430	4.1			
1.1KW	109.72	95.74	12.5	12.76	2030	1.8	WKM063B	90B5/B14	WSS1.1KW-4
	138.84	75.66	10	10.08	1910	1.8			
	183.84	57.14	7.5	7.62	1710	1.9			
	70.59	148.81	20	19.83	3230	2.5	WKM075B	90B5/B14	WSS1.1KW-4
	93.23	112.67	15	15.02	2950	3.3			
	109.38	130.96	12.5	12.80	2770	4.0			
	136.36	77.03	10	10.27	2960	3.2			
	180.10	58.32	7.5	7.77	2700	3.4			
	22.13	474.60	60	63.25	6000	1.0	WKM090C	90B5/B14	WSS1.1KW-4
	29.20	359.69	50	47.93	5540	1.0			
	34.67	302.96	40	40.18	5170	1.8	WKM090B	90B5/B14	WSS1.1KW-4
	43.13	243.54	30	32.30	4710	2.3			
	55.75	188.43	25	25.11	4430	2.8			
	69.35	151.47	20	20.19	4090	3.6			
	91.50	114.80	15	15.30	4330	3.0			
	107.69	97.54	12.5	13.00	4060	3.4			

WKM .... 性能参数 Performance Specifications

P_{1n} [KW]	n_2 [r/min]	M_{2n} [Nm]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	F_{r2} [N]	fs			
1.1KW	133.97	78.41	10	10.45	3750	3.3	WKM090B	90B5/B14	WSS1.1KW-4
	176.77	59.42	7.5	7.92	3420	3.4			
1.5KW	136.36	105.04	10	10.27	2550	3.7	WKM075B	90B5/B14	WSS1.5KW-4
	180.10	79.53	7.5	7.77	2330	3.9			
	34.67	413.13	40	40.18	4110	2.6	WKM090B	90B5/B14	WSS1.5KW-4
	43.13	332.09	30	32.30	3740	3.4			
	55.75	256.95	25	25.11	3520	4.1			
	69.35	206.55	20	20.19	4090	2.6			
	91.50	156.54	15	15.30	3730	3.4			
	107.69	133.01	12.5	13.00	3510	3.8			
	133.97	106.92	10	10.45	3240	3.8			
	176.77	81.03	7.5	7.92	2950	3.9			
2.2KW	55.75	376.86	25	25.11	4430	1.4	WKM090B	100B5/B14	WSS2.2KW-4
	69.35	302.93	20	20.19	4090	1.8			
	91.50	229.59	15	15.30	3730	2.3			
	107.69	195.08	12.5	13.00	3510	2.6			
	133.97	156.81	10	10.45	3240	2.6			
	176.77	118.85	7.5	7.92	2950	2.7			
3KW	107.69	266.02	12.5	13.00	2780	3.8	WKM090B	100B5/B14	WSS3KW-4
	133.97	213.84	10	10.45	2570	3.8			
	176.77	162.07	7.5	7.92	2340	3.9			

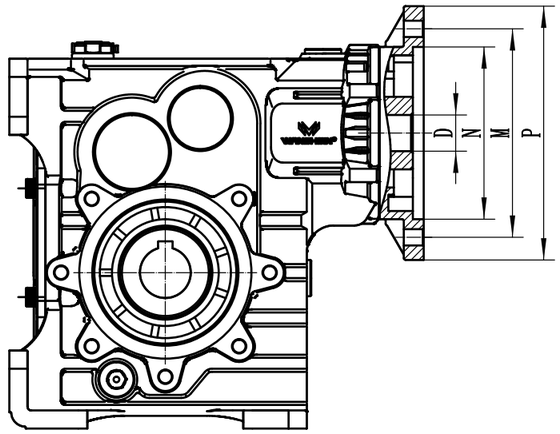
WKM...HS 性能参数 Performance Specifications

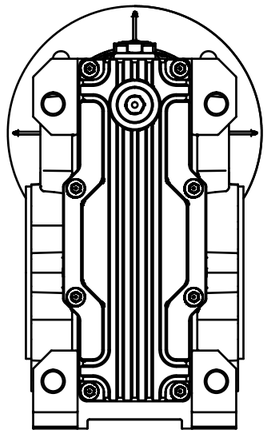
M_{2max} [Nm]	n_2 [r/min]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	P_{1n} [KW]	F_{r2} [N]	F_{r1} [N]	
130	7.06	200	198.17	0.10	4100	400	WKM050C..HS
130	9.11	160	153.75	0.14	4000	400	
130	11.36	120	123.25	0.17	3770	400	
130	14.64	100	95.63	0.21	3560	400	
130	17.57	80	79.69	0.28	3220	400	
120	23.79	60	58.85	0.31	3030	400	
110	28.55	50	49.04	0.33	2860	400	
130	35.2	40	39.77	0.51	2610	400	WKM050B..HS
130	45.37	30	30.86	0.69	2350	400	
130	56.8	25	24.65	0.84	2200	400	
130	73.2	20	19.13	1	2080	400	
130	87.84	15	15.94	1.4	1880	400	
130	109.72	12.5	12.76	1.6	1770	400	
130	141.41	10	9.90	1.9	1670	400	
100	169.7	7.5	8.25	2.0	1510	400	

WKM...HS性能参数 Performance Specifications

M_{2max} [Nm]	n_2 [r/min]	i 公称速比 Nominal Ratio	i 实际速比 Actual Ratio	P_{1n} [KW]	F_{r2} [N]	F_{r1} [N]	
200	7.06	200	198.17	0.16	4800	400	
200	8.94	160	156.60	0.21	4650	400	
200	11.36	120	123.25	0.26	4330	400	
200	14.37	100	97.40	0.31	4070	400	WKM063C..HS
160	19.03	80	73.56	0.35	3650	400	
140	23.36	60	59.94	0.35	3480	400	
120	30.93	50	45.27	0.36	3270	400	
200	35.20	40	39.77	0.79	2970	530	
200	44.55	30	31.43	1.0	2720	530	
200	56.80	25	24.65	1.3	2530	530	
200	71.87	20	19.48	1.5	2380	530	
190	95.16	15	14.71	2.0	2130	530	WKM063B..HS
165	109.72	12.5	12.76	2.0	2030	530	
135	138.84	10	10.08	2.0	1910	530	
100	183.84	7.5	7.62	2.05	1710	530	
350	7.02	200	199.48	0.28	6500	560	
350	8.75	160	160.00	0.37	6500	560	
350	11.32	120	123.64	0.44	5980	560	
350	14.12	100	99.17	0.56	5520	560	WKM075C..HS
350	18.65	80	75.08	0.74	5040	560	
350	22.38	60	62.55	0.89	4730	560	
350	29.56	50	47.36	1.10	4370	560	
350	35.09	40	39.90	1.4	4080	860	
350	43.75	30	32.00	1.8	3720	860	
350	56.62	25	24.73	2.2	3500	860	
350	70.59	20	19.83	2.8	3230	860	
350	93.23	15	15.02	3.6	2950	860	WKM075B..HS
350	109.38	12.5	12.80	4.4	2770	860	
350	136.36	10	10.27	5.5	2550	860	
280	180.10	7.5	7.77	5.8	2330	860	
500	6.78	200	204.93	0.4	8300	560	
500	8.43	160	164.73	0.53	8050	560	
500	10.93	120	128.08	0.63	7580	560	
500	13.60	100	102.96	0.8	7000	560	WKM090C..HS
500	17.94	80	78.03	1.1	6390	560	
450	22.13	60	63.25	1.1	6000	560	
350	29.20	50	47.93	1.1	5540	560	
500	34.67	40	40.18	1.9	5170	1260	
500	43.13	30	32.30	2.6	4710	1260	
500	55.75	25	25.11	3.1	4430	1260	
500	69.35	20	20.19	3.9	4090	1260	
500	91.50	15	15.30	5.2	3730	1260	WKM090B..HS
460	107.69	12.5	13.00	5.7	3510	1260	
360	133.97	10	10.45	5.7	3240	1260	
280	176.74	7.5	7.92	5.8	2950	1260	

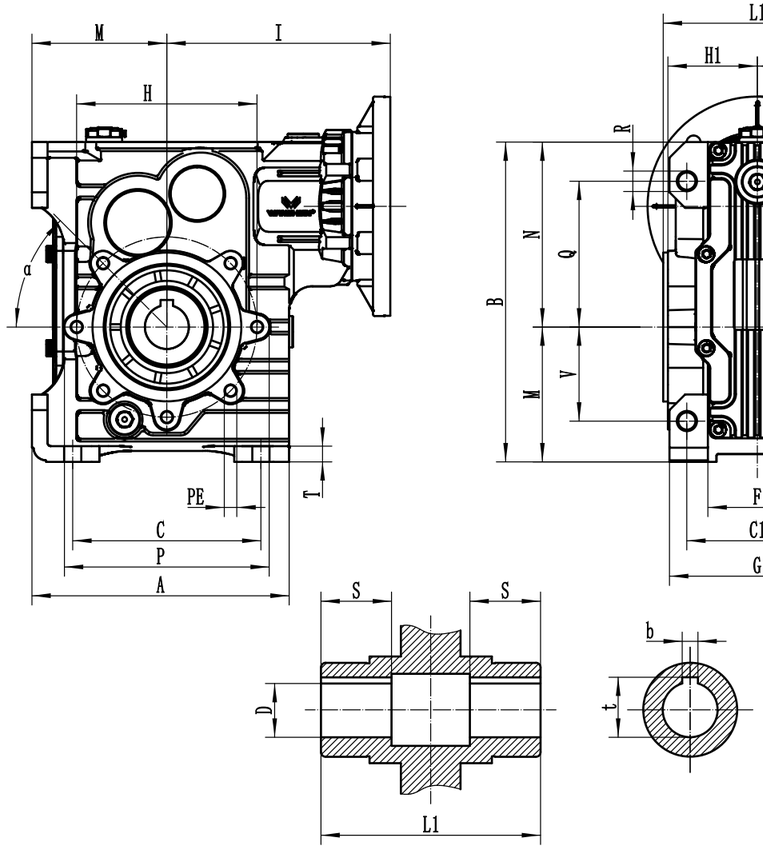
WKM外形尺寸表 Outline Dimension Table





WKM	输入法兰型号 Type of input Flange	N		M		P		i（速比/ratio）																	
								7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	200			
								B(2级/2 stage)								C（3级/3 stage）									
		B5	B14	B5	B14	B5	B14	D																	
050	63B5	95	-	115	-	140	-	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11			
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	14	14	-	-	-	-	-			
	80B5/14	130	80	165	100	200	120	19	19	19	19	19	-	-	-	-	-	-	-	-	-	-			
063	63B5	95	-	115	-	140	-	-	-	-	-	-	-	11	11	11	11	11	11	11	11	11			
	71B5/B14	110	70	130	85	160	105	-	-	-	-	14	14	14	14	14	14	14	14	-	-	-			
	80B5/14	130	80	165	100	200	120	19	19	19	19	19	19	-	-	-	-	-	-	-	-	-			
	90B5/B14	130	95	165	115	200	140	24	24	24	-	-	-	-	-	-	-	-	-	-	-	-			
075	63B5	95	-	115	-	140	-	-	-	-	-	-	-	-	-	-	-	11	11	11	11	11			
	71B5	110	-	130	-	160	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14	14			
	80B5/14	130	80	165	100	200	120	-	-	-	19	19	19	19	19	-	-	-	-	-	-	-			
	90B5/B14	130	95	165	115	200	140	24	24	24	24	24	-	-	-	-	-	-	-	-	-	-			
090	63B5	95	-	115	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11	11			
	71B5	110	-	130	-	160	-	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14			
	80B5/14	130	80	165	100	200	120	-	-	-	-	-	19	19	19	19	19	19	19	19	19	-			
	90B5/B14	130	95	165	115	200	140	24	24	24	24	24	24	24	24	24	24	-	-	-	-	-			
	100B5/B14	180	110	215	130	250	160	28	28	28	28	28	28	-	-	-	-	-	-	-	-	-			

WKM外形尺寸表 Outline Dimension Sheet

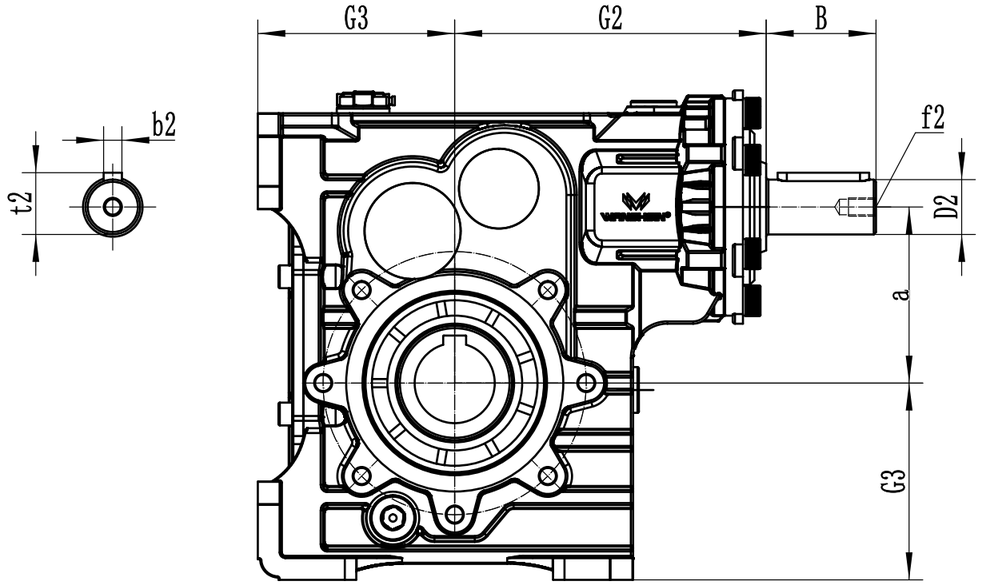


WKM	A	B	C	C1	D(H8)	E(h8)	F	G	H	H1	I	L1	M	N	O
050	120	152	70	70	25（24）	70	50.5	85	85	43.5	119	92	60	91.5	59
063	140	169	85	85	25（28）	80	59	103	95	53	125	112	72	97	60
075	164	204	90	90	28（35）	95	63	112	115	57	144	120	86	118	77
090	193	224	100	100	35（38）	110	72	130	130	67	146	140	103	121	79

WKM	P	Q	R	S	T	V	PE	b	t	α	Kg
050	94	64	8.5	30	7	40	M8×10(n=4)	8	28.3(27.3)	45°	3.8
063	112	80	8.5	36	8	50	M8×14(n=8)	8	28.3(31.3)	45°	6.2
075	131	93	11	40	10	60	M8×14(n=8)	8(10)	31.3（41.3）	45°	9
090	153	102	13	45	11	70	M10×18(n=8)	10	45.3	45°	13

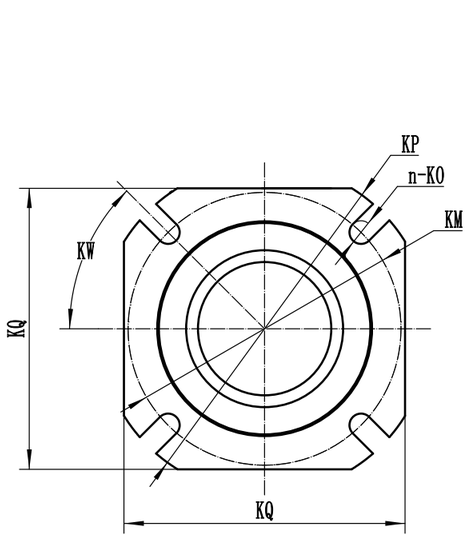
注: *重量 (Kg) 不包含电机的重量。 Note: *Weight (Kg) excluding motor.

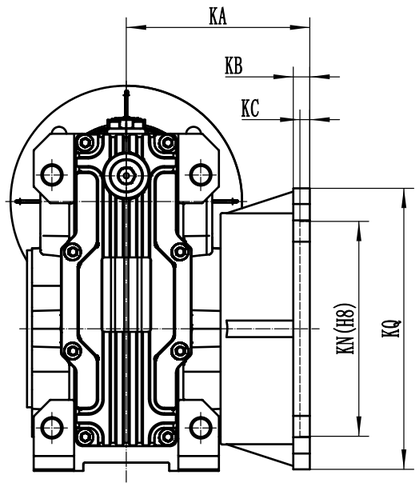
WKM外形尺寸表 Outline Dimension Sheet



WKM	B	D2j6	G2	G3	a	b2	t2	f2	输入轴平键选用 Flat Key for Input Shaft	b×h×l
050	30	14	112.5	60	59	5	16	M6		5×5×22
063	40	19	123.5	72	60	6	21.5	M6		6×6×32
075	50	24	136	86	77	8	27	M8		8×7×40
090	50	24	139.5	103	79	8	27	M8		5×5×22

WKM系列输出法兰尺寸图表 Output Flange Dimension Chart



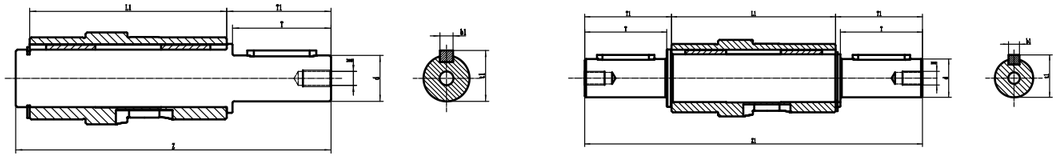


WKM	FA								
	a1	KA	KB	KC	KM	KNH8	KO	KP	KQ
063	45°	82	10	6	150	115	11(n=4)	180	142
075	45°	111	13	6	165	130	14(n=4)	200	170
090	45°	111	13	6	175	152	14(n=4)	210	200

WKM	FB								
	a1	KA	KB	KC	KM	KNH8	KO	KP	KQ
063	45°	112	10	6	150	115	11(n=4)	180	142
075	45°	90	13	6	130	110	11(n=4)	160	-
090	45°	122	18	6	215	180	14(n=4)	250	-

WKM	FC								
	a1	KA	KB	KC	KM	KNH8	KO	KP	KQ
050	45°	89	10	5	130	110	9.5(n=4)	160	-
063	45°	98	10	5	165	130	11(n=4)	200	-
090	45°	110	17	6	165	130	11(n=4)	200	-

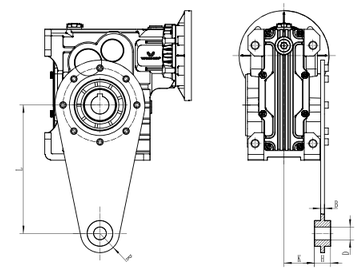
WKM系列输出轴尺寸图表 Output Shaft Dimension Chart



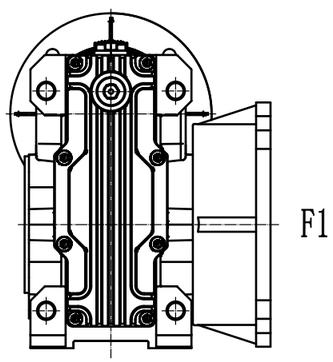
WKM	d（h6)	T	T1	L1	Z	Z1	M	b1	t1
050	25	50	53.5	92	153	199	M10	8	28
063	25	50	53.5	112	173	218	M10	8	28
075	28	60	63.5	120	192	247	M10	8	31
090	35	80	84.5	140	234	308	M12	10	38

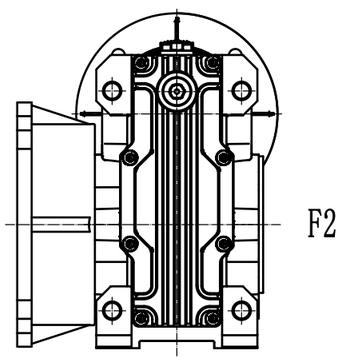
WKM系列扭力臂尺寸图表 Torque Arm Dimension Chart

WKM	L	H	K	D	R	B
050	100	14	38.5	10	18	4
063	150	14	49	10	18	6
075	200	25	47.5	20	30	6
090	200	25	57.5	20	30	6

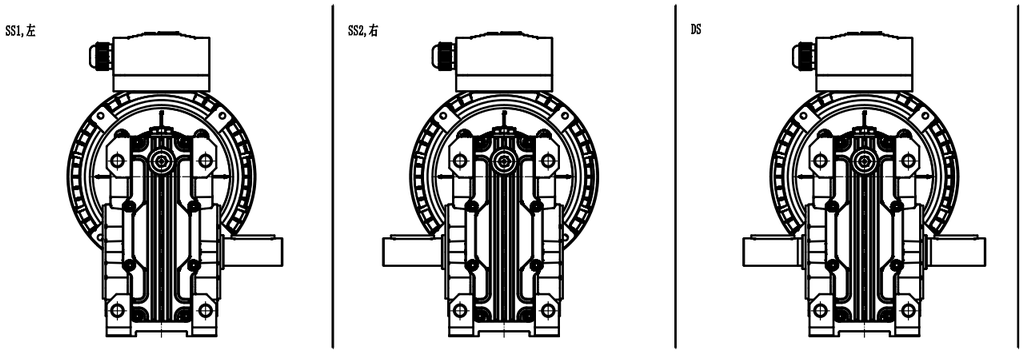


WKM输出法兰位置图 Output Flange Position Diagram

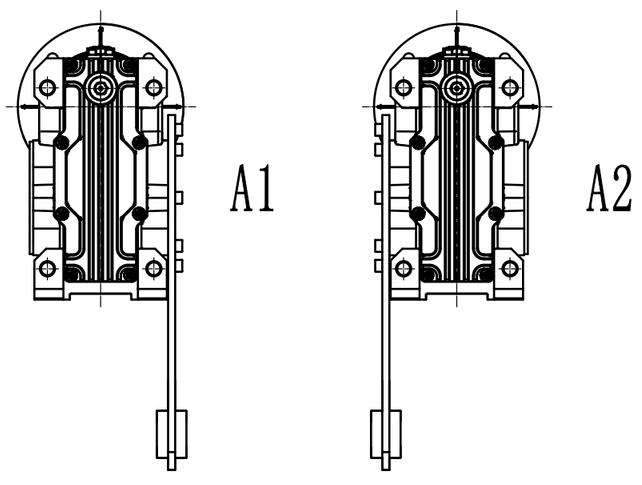




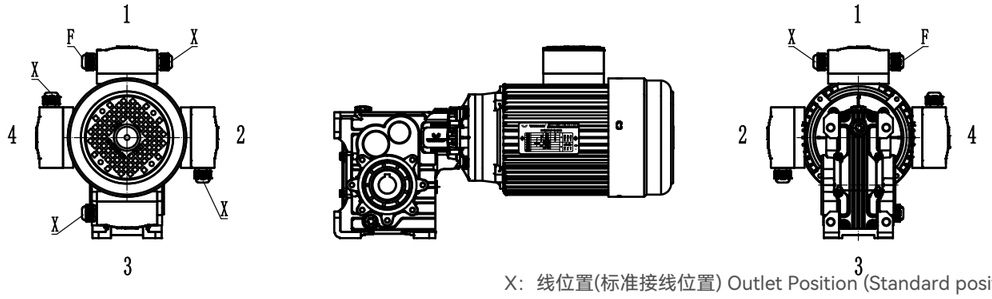
WKM输出轴位置图 Output Shaft Position Diagram



WKM扭力臂位置图 Torque Arm Position Diagram



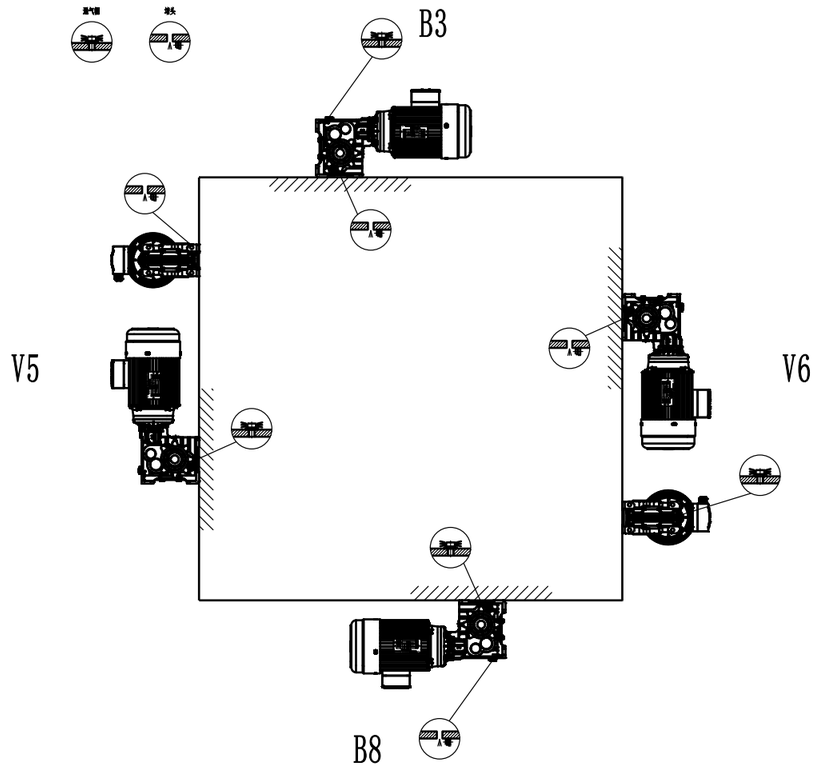
接线盒位置 Terminal Box Position



X：线位置(标准接线位置) Outlet Position (Standard position)
F：反向出线 Reverse Outlet

INSTALLATION
安装

■ 安装方位 Installation Azimuth



安装方法 Installation Methods

使用限制 Service Restriction

・这本样本给出的参数基本上是按B3安装方位来编的。对于其他安装方位和输入转速，请参考下面表格中相应参数。当遇到下列应用情况时，如有必要请与我们技术服务人员联系。

1、在原有上提高转速时；
2、应用在惯性特别大的设备上时；
3、应用在如升降机(需要自锁考虑)时；
4、当减速机出现故障有可能会对操作者造成危害时；
5、应用在减速机过度疲劳状态时；
6、工作环境温度低于-5℃或高于40℃时；
7、在化学腐蚀环境中使用时；
8、在盐性环境中使用时；
9、在辐射性高的环境中使用时；
10、在环境气压不在正常大气压力下使用时；
11、安装方位在这样本中没有被提到。

・ The parameters provided in this catalog are essentially compiled based on the B3 mounting position. For other mounting positions and input speeds, please refer to the corresponding parameters in the following tables. If any of the following application conditions are encountered, please contact our technical service personnel if necessary:

1. Increasing the speed beyond the original specification.
2. Used on equipment with particularly high inertia.
3. Used in applications such as elevators (where self-locking must be considered).
4. A gear motor malfunction could potentially endanger the operator.
5. The gear motor is used under conditions of excessive fatigue.
6. The operating ambient temperature is below -5℃ or above 40℃.
7. Used in chemically corrosive environments.
8. Used in saline environments.
9. Used in environments with high levels of radiation.
10. The environmental pressure deviates from normal atmospheric pressure.
11. The mounting orientation is not mentioned in this catalog.

・避免把减速机部分或整台浸入水中或其他液体中。

・减速机承受的最大负载扭矩不能超过两倍于性能参数表中规定的正常扭矩(当服务系数fs=1时)；这里最大负载扭矩是指承受瞬间短暂的过载，他出现在过载启动、刹车、振动或其他动态操作环境中。

・Avoid partially or fully submerging the gear motor in water or other liquids.

・The maximum load torque that the gear motor can withstand must not exceed twice the normal torque specified in the performance parameter table (when the service factor fs=1). This maximum load torque refers to momentary and brief overload conditions, which may occur during overload start-ups, braking, vibrations, or other dynamic operating environments.

WKM	050	063	075	090
V5:1500 < n1 < 3000	-	-	B	B
n1 > 3000	B	B	A	A
V6	B	B	B	B

A. 不被推荐的使用方式　　B. 需要确定应用情况合适性或与我们技术服务人员联系
A. Not recommended　　B. Need to confirm the application suitability or contact with our technician

安装使用与保养 Installation Usage Maintenance

安装减速机时要注意以下一些事项：

When installing the gear motor, please pay attention to the following points:

(1) 减速机与机械设备装配之前，要检查减速机输出端的旋转方向是否正确；
(2) 减速机与原动机、设备装配之前，应检查各轴径、孔径、键和键槽的偏差尺寸，避免装配过紧、过松影响减速机性能；
(3) 减速机必须牢固地安装在机械设备上，避免有松动或振动；
(4) 尽可能地避免减速机暴露在烈日阳光下和恶劣环境中；
(5) 如果减速机存放时间长达4-6个月，应检查油封是否浸润在润滑油中，可能油封唇口会粘在轴上，甚至失去了弹性，由于适合的弹性是油封必须的工作条件，所以推荐更换油封；

(6) 所有橡胶件和透气孔不能沾有油漆；
(7) 与减速机的空心轴或实心轴配合连接时，应在轴上配合部分涂上润滑油，以免卡死或氧化；
(8) 使用时必须检查油位(如油位镜孔或打开油塞,小型号是没有的)；
(9) 使用新减速机时，不能满负载起动，应该逐步增大负载；
(10)使用各类电机直连型减速机时，若电机重量偏大，应设支撑装置；
(11)确保电机风扇附近有良好的通风环境，以免影响散热效果；
(12)减速机的标准工作环境温度是-5℃至40℃，如果不在这范围时，请与我们技术服务人员联系。

(1) Before installing the gear motor with the mechanical equipment, check whether the rotation direction of the gear motor's output end is correct.
(2) Before installing the gear motor with the prime mover and equipment, inspect the dimensional deviations of the shaft diameters, bore diameters, keys, and keyways to avoid overly tight or loose fits that may affect the gear motor's performance.
(3) The gear motor must be securely mounted on the mechanical equipment to prevent looseness or vibration.
(4) Avoid exposing the reducer to direct sunlight or harsh environments as much as possible.
(5) If the gear motor has been stored for 4–6 months, check whether the oil seals are immersed in lubricating oil. The sealing lip of the oil seal may adhere to the shaft, potentially losing its elasticity. Since proper elasticity is essential for the oil seal's function, replacement of the oil seal is recommended.
(6) All rubber parts and ventilation holes must not be contaminated with paint.
(7) When connecting with the hollow or solid shaft of the gear motor, apply lubricating oil to the mating part of the shaft to prevent seizing or oxidation.
(8) During use, the oil level must be checked (e.g., through the oil sight glass or by opening the oil plug—smaller models may not have this feature).
(9) When using a new gear motor, do not start it under full load. Gradually increase the load instead.
(10) When using motor-connected gear motors of various types, if the motor is relatively heavy, a support device should be provided.
(11) Ensure adequate ventilation around the motor fan to avoid affecting heat dissipation.
(12) The standard operating ambient temperature for the gear motor is −5°C to 40°C. If the temperature falls outside this range, please contact our technical service personnel.

使用须知 Instructions

工作环境温度不在表中范围内，请与我们技术服务人员联系。

If the ambient temperature is not within the range listed in the table, please contact our technician.

(1)当工作环境温度低于-30℃或高于60℃时，要使用特殊材质的油封。
(2)当工作环境温度低于0℃时，必须考虑下列情况:
- 选用的电机必须在低温下能正常工作;
- 电机的功率必须满足在低温下有较大启动力矩要求;
- 如果减速机箱体的材质是铸铁，在温度-15℃以下时，箱体会变得很脆，要注意尽量避免撞击;
- 在开始使用阶段时，由于润滑油的粘度很高，可能会产生一些问题，所以刚开始启动时最好让它空载运转几分钟。减速机运转大约10000小时后，应更换润滑，换油频率按减速机实际运行情况和工作环境条件而定。
(3) 所有规格减速机在出厂时已加注了润滑油。
(4)蜗轮蜗杆系列的减速机，在特定的工作环境，需配排气阀(可选配件)。
(5)对于齿轮箱，首次换油必须在工作大约300小时(齿轮磨合期)后进行，在换油时应使用合适的清洗剂小心地冲洗齿轮箱，不得将矿物油和合成油混合。
(6)每3000工作小时，最低程度半年，应检测油以及油位，油封密封不严引起滴漏的常规检测，若是IEC输入的减速机，则检测检查弹性体，必要时进行更换。
(7)根据不同的工作条件(见下图)而定，最长每三年检测一次，更换矿物油，更换轴承润滑油脂。
(8)根据不同的工作条件而定，更换输出轴上的油封。
(9)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、出厂日期、编号、已使用时间、主机名称、主机生产单位和故障类型)后,再采取合理的措施。

(1) When the operating ambient temperature is below -30°C or above 60°C, oil seals made of special materials must be used.
(2) When the operating ambient temperature is below 0°C, the following conditions must be considered:
- The selected motor must be capable of normal operation at low temperatures.
- The motor power must meet the requirement for higher starting torque at low temperatures.
- If the gearbox is made of cast iron, it may become brittle at temperatures below -15°C, so impacts should be avoided as much as possible.

- During the initial operation stage, issues may arise due to the high viscosity of the lubricating oil. It is recommended to run the reducer under no load for several minutes upon startup. After approximately 10,000 hours of operation, the lubricant should be replaced. The frequency of oil changes depends on the actual operating conditions and ambient environment of the reducer.

(3) All standard gear motors are pre-filled with lubricating oil before shipment.

(4)For worm gear motors, an exhaust valve (optional accessory) is required under specific operating conditions.

(5)For gearboxes, the first oil change must be performed after approximately 300 hours of operation (gear run-in period). When changing the oil, the gearbox should be carefully flushed with a suitable cleaning agent. Mineral oil and synthetic oil must not be mixed.

(6)Every 3,000 operating hours, or at least every six months, inspect the oil and oil level, and routinely check for oil seal leakage. For gear motors with IEC input, inspect the elastomer and replace it if necessary.

(7)Depending on the operating conditions (see the table below), inspect and replace mineral oil and bearing grease at least once every three years.

(8)Depending on the operating conditions, replace the oil seals on the output shaft as needed.

(9)In case of product failure, do not disassemble any components. Contact our after-sales service department (please provide the gear motor specifications, manufacturing date, serial number, operating hours, host machine name, host manufacturer, and fault description) before taking appropriate measures.

润滑油 Lubrication

减速机型号 Model	润滑油加注量 Lubricant Filling Amount 单位 Unit: 升（L）											
	B3		B6		B8		B7		V5		V6	
	箱体	轴承室	箱体	轴承室	箱体	轴承室	箱体	轴承室	箱体	轴承室	箱体	轴承室
WKM050B	0.32	0.01	0.35	0.01	0.27	0.01	0.32	0.01	0.35	0.01	0.18	0.01
WKM050C	0.28	0.02	0.25	0.02	0.23	0.02	0.28	0.02	0.30	0.02	0.22	0.03
WKM063B	0.52	0.02	0.55	0.02	0. 43	0.02	0.50	0.02	0.6	0.04	0.30	0.04
WKM063C	0.43	0.03	0.38	0.03	0.34	0.03	0.41	0.03	0.48	0.05	0.30	0.05
WKM075B	0.64	0.02	0.75	0.02	0.57	0.02	0.63	0.02	0.76	0.03	0.36	0.04
WKM075C	0.64	0.03	0.56	0.03	0.53	0.03	0.61	0.03	0.74	0.04	0.50	0.05
WKM090B	0.93	0.02	1.04	0.02	0.8	0.02	0.85	0.02	1.08	0.03	0.48	0.04
WKM090C	0.92	0.02	0.75	0.02	0.74	0.02	0.91	0.02	1.00	0.03	0.61	0.04

表示在此安装方式，不能仅凭油位塞加注润滑油，油位需高出油位塞，加注量按表内所示。

Indicates that with this installation orientation, lubricating oil cannot be added solely by relying on the oil level plug. The oil level must be higher than the oil level plug, and the filling quantity should be as indicated in the table.

订货须知 Ordering Notice

存放 Storage

(1) 有顶棚，防雨雪，无振动。

(2) 在设备和地面之间垫放木块或其他材料。

(3) 开箱后暂不使用的减速机在其加工表面涂上防锈油，并应及时放回包装箱内。

(4) 在定期检查的情况下，两年以及更长时间。在进行检查时，应检查清洁度和机械损伤，检查防锈层是否完好。

(1) Store in a covered area, protected from rain and snow, and free from vibration.

(2) Put wooden blocks or other materials between the equipment and the ground.

(3) For gear motors not to be used immediately after unpacking, apply anti-rust oil to machined surfaces and promptly return them to the packaging box.

(4) Under regular inspection conditions, for storage periods of two years or longer, inspect for cleanliness and mechanical damage during checks, and ensure the anti-rust coating remains intact.

订货须知 Notice for order

・订货时请根据使用需要的转速范围，输出转矩，结构形式，对照性能参数、尺寸表、安装和操作方位图，合理选择机型，写明型号标记(下单时是否带电机请说明，一般按不带电机供应)。订货时选择的安装方位应与安装方法一致，不然容易造成漏油，影响使用寿命，若安装方位特殊请另加说明。

・订货时请尽量选择本目录内的标准产品，如有特殊要求或配用特殊电机请附加说明。

・When placing an order, reasonably select the model based on the required speed range, output torque, and structural configuration, referring to the performance parameters, dimensional tables, and installation/orientation diagrams. Clearly indicate the model designation (please specify whether a motor is included when ordering; units are generally supplied without motors). The installation orientation selected during ordering must align with the installation method; otherwise, oil leakage may occur, affecting service life. If a special installation orientation is required, please provide additional details.

・When placing an order, prioritize standard products listed in this catalog. If special requirements or custom motors are needed, please include additional instructions.

MALFUNCTIONS

运转故障

减速机运转故障 Gear Motor Operation Troubleshooting

故障 Problem	可能的原因 Probable cause	解决方法 Solution
异常、均匀的运转噪声 Abnormal and uniform running noise	A. 滚动/碾压噪声:轴承损坏 B. 冲击型噪声齿轮啮合不均匀 A. Rolling/Grinding Noise: Bearing damage B. Impact-Type Noise: Uneven gear meshing	A. 检测润滑油,更换轴承 B. 请向客户服务部咨询 A. Test the lubricating oil and replace the bearings. B. Please consult the customer service department.
异常、均匀的运转噪声 Abnormal and uniform running noise	机油中有异物 Foreign matter has been detected in the lubricating oil.	A. 检测润滑 B. 停止运转传动装置,向客户服务部咨询 A. Check the lubrication. B. Stop the transmission device and consult the customer service department.
机油泄漏 A. 在减速机盖上 B. 在电机凸缘上 C. 在电机轴密封圈上 D. 在减速机凸缘上 F. 在输出端轴密封圈上 Oil leakage A. On the reducer cover B. On the motor flange C. On the motor shaft seal ring D. On the reducer flange F. On the output shaft seal ring	A. 减速机底座上的橡胶密封发生渗漏 B. 密封圈损坏 C. 减速机没有排气 A. The rubber seal on the base of the reducer is leaking. B. The sealing ring is damaged. C. The gear motor does not have an exhaust function.	A. 拧紧各个外盖上的螺钉并且观察减速机。如果机油继续泄露,请向客服服务部咨询 B. 请向客户服务部咨询 C. 给减速机排气参见安装方式") A. Tighten the screws on all external covers and observe the reducer. If oil continues to leak, please consult the customer service department. B. Please consult the customer service department. C. Vent the reducer (refer to the installation method section).
机油从排气阀门旁渗出 The lubricating oil seeped out beside the exhaust valve.	A. 机油太多 B. 传动装置安装方式错误 C. 频繁冷起动(机油起泡沫)和/或者较高的油位 A. Too much lubricating oil. B. Incorrect installation method of the transmission device. C. Frequent cold starts (foaming of lubricating oil) and/or excessively high oil level.	A. 修正油量(参见"润滑油") B. 正确安装排气阀并且矫正油位(参见“安装方式”) A. Adjust the oil quantity (refer to "Lubricating Oil"). B. Properly install the vent valve and correct the oil level (refer to "Installation Method").
尽管电机在运转或者传动轴已经被驱动，但是传动轴不转动 Although the motor is running or the transmission shaft has been driven, the transmission shaft does not rotate.	减速机中的轴轮毂联接断裂 The shaft-hub connection in the gear motor has broken.	将减速机或减速电机送修 Please send the gearbox or gear motor for repair.

注意：在磨合试运转阶段（24小时的运转时间内），轴密封圈有可能出现短期内的漏油油脂的现象。

Note: During the initial run-in phase (within the first 24 hours of operation), the shaft seal may exhibit temporary leakage of lubricating oil.