GEAR格尔

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一站式传动技术解决方案专家
ONE-STOP DRIVE TECHNOLOGY
SOLUTIONS EXPERTS

GEAR格尔

减速机产品手册







上图：于 2022 年完工的位于平阳万全镇全新格尔办公楼

右一：过去格尔工厂的一侧

右二：格尔减速机南通有限公司

公司简介 Company Profile

格尔 GEAR 是一家集传动设备研究、开发、制造和销售为一体的知名企业，下设温州、南通、山东三大生产基地，是中国齿轮协会理事单位、国家高新技术企业、浙江省科技型企业、温州市信息化示范单位。公司技术研发中心被认定为浙江省省级企业技术中心，现拥有 2 项国家发明专利，22 项实用新型专利。

格尔产品已广泛应用于冶金矿山、啤酒饮料、印染纺织、起重运输、筑路机械、计量计控、石油化工、仓储物流、木工机械、环保设备、印刷包装、粮油面粉、制药皮革、立体停车等众多领域。在同行中率先通过 SO9001:2000 质量管理体系认证、14000 环境管理体系认证、CE 认证、煤矿安全认证、矿山安全认证、瑞士 SGS 认证等。

公司主营产品有四大系列硬齿面减速机，大功率齿轮箱，蜗轮减速机，行星减速机，摆线针轮减速机，精密行星减速机，齿轮马达，完善的系列产品满足你的所有需求。

格尔公司秉着传承、创新、开拓的精神与您一起共创美好未来！

GEAR speed reducer company is a famous professional enterprise that integrates research, development,manufacture and sales of drive equipment. Our company has three manufacturing bases, in Wenzhou Nantong and Shandong City, is a director unit of China gear professional association, Country high new technical enterprise, Zhejiang science and technology enterprise, Wenzhou informatization demonstration enterprise. R&D center is considered as Zhejiang province enterprise technic center, has 2 invention patents and 22 utility-model patents.

GEAR products are widely used in metallurgy mine, beer beverage, painting and dyeing, hoisting and transport, machinery of consructing road, measure and control, storage and logistics.woodworking machinery,equipment of environment protection, packing, pharmacy and leather, stereo garage etc. Company firstly passed the ISO9001:2000 Quality Management System, 14000 Environment Management System, CE certification, Coal and mining safe certification, SGS certification etc. Company main products are R,S,K,F hard-surface geared motor, high-power gear box, worm gear reducer, planetary gear reducer, cycloidal pin wheel reducer, precision planetary reducer, AC/DC Motor, complete series products can meet all your needs.

GEAR company is creating a brilliant future together with you by holding the spirit of inheriting, innovating and pioneering.

发展历程 Development History

1988年

创立 瑞安迈特传动机械设备厂

研发成功无极变速机并上市

1988 extablish Rui'an Maite Transmission Equipment Factory.

Successfully reserch and develop MB variable speed reducer, and launch.

1996年

更名 温州迈特传动机械有限公司

研发成功齿轮减速机并上市

1996, change name to Wenzhou Maite Transmission Equipment CO.,LTD

Successfully reserch and develop helical gear reducer, and launch.

2005年

成立 浙江欧迈特减速机械有限公司

主营四大系列减速机，工业齿轮箱

2005, extablish Zhejiang Omiter Speed Reducer CO.,LTD

Mainly produce GR/S/K/F helical gear reducer, industrial gearbox.

2008年

浙江欧迈特减速机械有限公司成立企业技术中心

2008, Zhejiang Omiter Speed Reducer CO.,LTD, extablish the Enterprice Technology Center.

2013年

浙江格尔减速机有限公司成立

2014年

通过 ISO9001 认证，温州科技型企业认证

2013 Zhejiang GEAR speed reducer CO., LTD is extablished.

2014 Passed ISO9001 certification, Wenzhou Science and Technology Enterprise Certification.

2016年

获得省级高新技术企业认证

2016 Obtained Provincial High-tech Enterprise Certification.

2022年

山东格尔减速机有限公司成立

浙江格尔减速机有限公司和浙江欧迈特减速机械有限公司合并

2022 Shandong Gear Speed Reducer CO.,LTD is extablished.

Zhejiang Omiter Speed Reducer CO.,LTD merged into Zhejiang Gear Speed Reducer CO.,LTD

2021年

格尔减速机（南通）有限公司成立

2021 Gear Speed Reducer(Nantong) CO.,LTD is extablished.

Future ~

一站式传动技术解决方案专家
ONE-STOP DRIVE TECHNOLOGY SOLUTIONS EXPERTS







1：格尔生产车间中的瑞士莱斯豪尔 REISHAUER 磨齿机 –1
2：格尔生产车间中的瑞士莱斯豪尔 REISHAUER 磨齿机 –2
3：格尔生产车间中的瑞士莱斯豪尔 REISHAUER 磨齿机 –3
4：格尔生产车间中来自沈阳机床 SYMG 的卧式车削车床
5：日本马扎克 Mazak 金属箱体加工生产线
6：格尔生产车间中来自秦川机床 QCMT&T 的设备
7：格尔生产车间中来自秦川机床 QCMT&T 的数控成形砂轮磨齿机





生产合作伙伴 Production Partner

格尔 GEAR 的生产线机床设备来自国内外知名机床制造厂商，如瑞士莱斯豪尔 REISHAUER、日本山崎马扎克 MAZAK、重庆机床 CHMTI、秦川机床 QCMT&T、沈阳机床 SYMG

GEAR's production line machine tools come from well-known machine tool manufacturers at home and abroad, such as Switzerland REISHAUER, Japan MAZAK, CHMTI, QCMT&T, Shen SYMG.

REISHAUER

Mazak

SYMG

秦川机床

CHMTI 重庆机床





应用领域 Application Area

电力设备/煤炭机械/冶金设备/环保水处理/环保垃圾处理/水泥机械/港口起重/物流输送与分拣/舞台设备/纺织印染设备/塑料机械/包装机械/木工机械/自动化流水线设备/畜牧机械/粮油机械/化工搅拌设备/建筑机械/造纸机械/汽车生产线设备/焊接设备/陶瓷设备/玻璃设备/烟草设备/铸造机械/工程机械/锂电装备

Electric power equipment /Coal mechanical /Metallurgical equipment /Environmental protection water treatment /Disposal /Cement machinery /Port lifting /Logistics delivery and sorting /Stage /Textile printing and dyeing equipment /Plastic machinery /Packaging machinery /Woodworking machinery /Automated assembly line equipment /Livestock machinery / Grain and oil machinery /Chemical mixing equipment /Construction /Papermaking machinery /Automobile production line equipment /Welding equipment /Ceramic equipment /Glass equipment /Tobacco equipment /Casting machinery / Construction machinery /Lithium electric equipment

三一集团 SINOMA 中国中材 中联重科

鞍钢集团 ANSTEEL CHTC 中国一重 CFHI

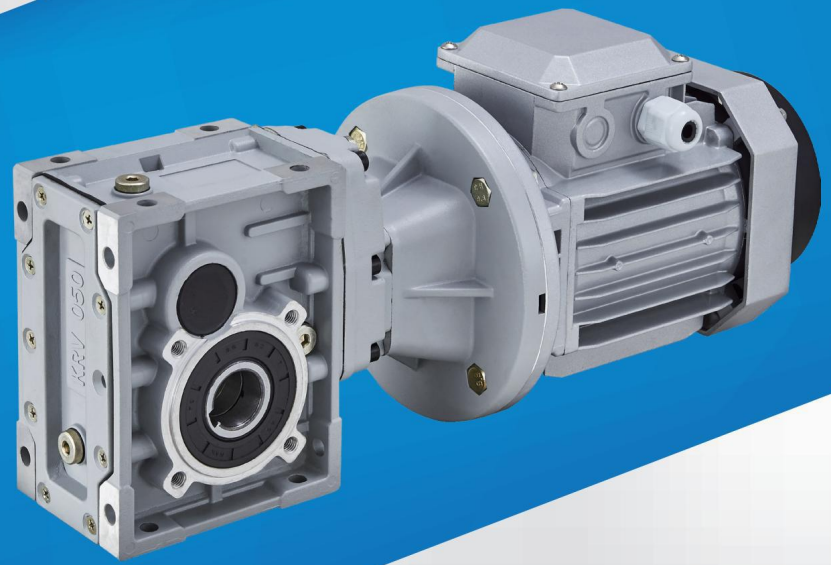
CSR 中国南车 上海电气 SHANGHAI ELECTRIC

JIER 济南二机床集团有限公司 JIER MACHINE-TOOL GROUP CO.,LTD CMIG Drawin 中民筑友 BAOSTEEL

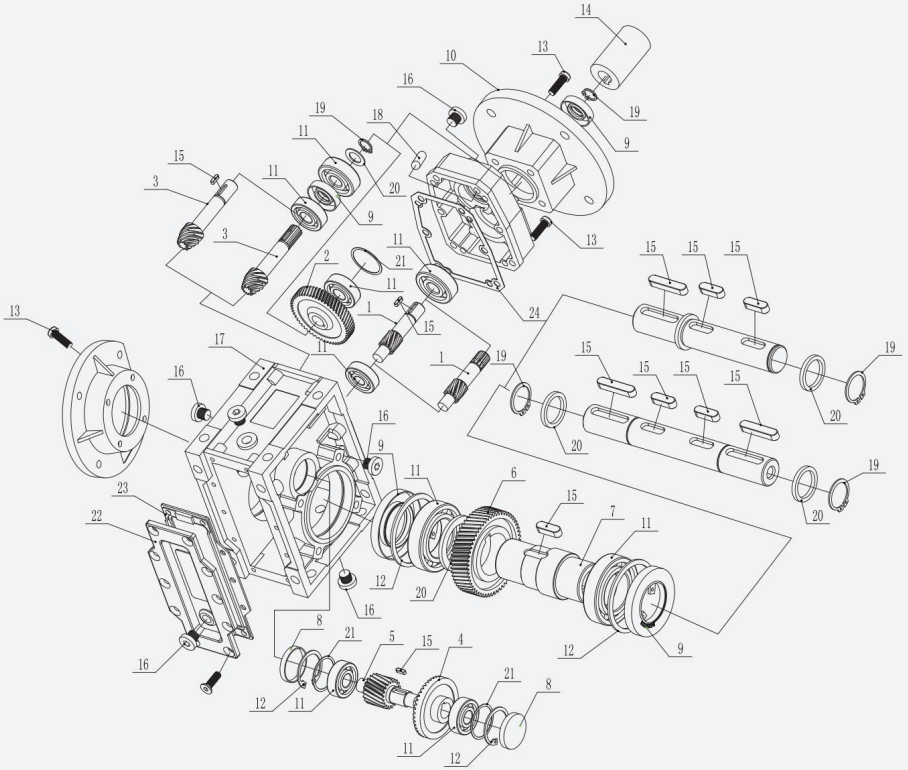
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HKM DOUBLE CURVED SURFACE GEAR REDUCER

HKM双曲面齿轮减速机



结构分解图 / STRUCTURE DIAGRAM



序号	名称	序号	名称	序号	名称	序号	名称
1	主动齿轮/Pinion	7	输出轴/outfut shaft	13	内六角螺丝钉/Inner hex screw	19	轴用挡圈/Shaft–circlip
2	从动齿轮/Gear	8	油盖/oil cap	14	输入轴/input shaft	20	垫圈/Washer
3	主动齿轮轴/Pinion shaft	9	油封/Oil seal	15	键/Key	21	调整垫片/Shim ring
4	从动齿轮轴/Gear shaft	10	输入法兰/Intput flange	16	油塞/Oil plug	22	齿轮箱盖板/Gearcase cover
5	主动齿轮/Pinion	11	轴承/Bearing	17	齿轮箱体/Gearcase	23	橡胶垫/Rubber gasket
6	从动齿轮轴/Gear	12	孔用挡圈/Hole–circlip	18	圆柱销/round Pin	24	密封纸垫片/Housing gasket

设计特征 / DESIGN CHARACTERISTIC

结构特点 / Produts characteristics

1.采用准双曲面齿轮传动，传动比大；
2.输出扭矩大，传动效率高，节能环保；
3.优质铝合金铸造，重量轻，不生锈；
4.传动平稳，噪音小，适合在恶劣环境中长期连续工作；
5.美观耐用，体积小；
6.可适应全方位安装，应用广泛，使用方便；
7.HKM系列减速机安装尺寸与NMRV系列蜗轮蜗杆减速机完全兼容（HKM050与NMRV050部分尺寸不同）
8.模块化组合，可多种形式组合，满足各种传动条件的需求。

1.Driven by hypoid gear,has big ratios.
2.Large in output torque,high effciency,energy saving and environmental protection.
3.Made of high-quality aluminum alloy,light in weight and non-rusting.
4.Smooth in running and low in noise, can work long time in dreadful conditions.
5.Good-looking in appearance, durable in service life and small in volume.
6.Suitable for all round installation,wide application and easy of use.
7.The mounting dimension of HKM series are compatible with NMRV series gear unit((A part of NMRV050 dimensions are different from HKM050)
8.Modular and multi-structure can meet the demands of various conditioos

优势对比 / Comparative advantage

准双曲面齿轮的啮合摩擦小，传动效率高达90%以上，与蜗轮蜗杆减速机相比效率提高10%-40%。

The hypoid gear has low friction,efficiency is as high as 92%, compared with the worm gearbox,the efficiency improved about 10%-40%

型号 Type	传动比 Ratios[i]	输入转速 Input speed[n1]	效率 Efficiency[η]
HKM075	30.24	1400	90%
NMRV075	30	1400	60%

主要材料 / Main materials

1.外壳：铝合金（机座 050-090）　　灰铸铁（机座 110））
1.Housing: die-cast aluminum alloy (frame size:050 to 090)

2.齿轮：铝合金（机座 050-090）　　灰铸铁（机座 110））
2.Gear wheel: 20CrMnTi carbonization & nitriding treatment make the hardness of gear's surface up to 58-62 HRC,retain carburized layer's thickness between 0.3 and 0.6mm after accurate grinding.

型号说明 / MODEL ILLUMINATE

HKM/N	050	2	30	F	DZ1	TA	B3	71B5
1	2	3	4	5	6	7	8	9

序号	说明	NO.	
1	减速机代号:HKM-N标识轴输入	1	Gear box's code:HKM/N shaft inputting
2	减速机规格：050 063 075 090 110	2	models of gearbox:050 063 075 090 110
3	传动等级：2级 、3级	3	Drive stage: 2stage,3stage
4	减速机速比i	4	Ratio
5	1.无代号表示不带输出法兰 2.FA,FB,FC,FD,FE(1/2):输出法兰代号和位置	5	1.No mark menms no output flange 2.FA FB FC FD FE(1/2):the code and position of output shaft
6	1.无代号表示孔输出 2.DZ(1/2):单向输出轴和位置 3.SZ：双向输出轴	6	1.No mark means hole output 2.DZ(1/2):single output shaft and the position 3.SZ:double ways output shaft.
7	扭力臂，不标注,不带扭力臂	7	Torque arm,no mark means no torque arm
8	安装方法代号	8	The code of installation position
9	电机基座号及安装形式	9	Frame code and installation ways.

选型相关参数 / RELEVANT PARAMETER

功率 P / Power P

$$P_1=P_2/\eta\,(kw) \qquad P_{1n}\geqslant P_1\cdot fs\,(kW)$$

P_{1n}	P_1	P_2	fs	η
输入电机额定功率 Rated power of input motor	输入功率 input power	输出功率 output power	服务系数 Service factor	传动效率 Transmission effciency

转速 n / Rotation speed n

n_1 减速机输入转速　Gear units input speed

n_2 减速机输出转速　Gear units output speed

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下降

If driven by the extemal gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life.Higher input rotation speed is permitted, but in this situation,the rated torque M_2 will be reduced

传动比 i / Transmission ratio i

$$i=n_1/n_2$$

传动比通常为小数，在选型表中保留与两位小数

Usually transmission ratio is decimal fraction with 2 radix point tagged in selection tables.

扭矩 M / Torque m

$$M_2=M2n\geqslant fs\,(N\cdot m)$$

$$M_2=9550\cdot P_1\cdot \eta/n_2(Nm)$$

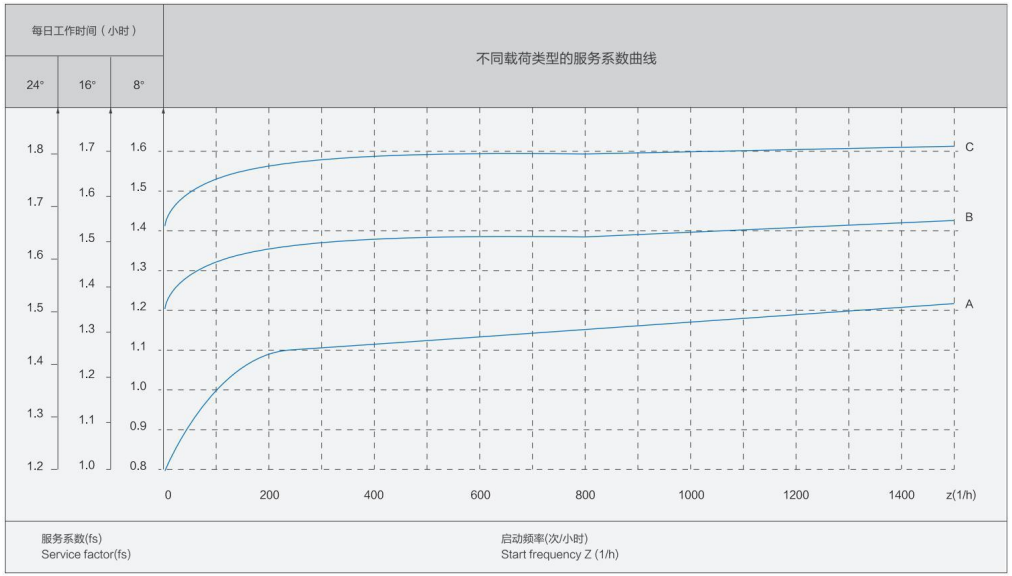
M_2 输出扭矩　M_{2n} 额定输出扭矩
P_1 输入功率　η 传动效率
fs 服务系数

M_2 Output torque　M_{2n} Rated output torque
P_1 Input power　η Transmission efficiency
fs Service factor

服务系数 fs / Service factor fs

使用减速机时，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使用数,按在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。

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor fs.The service factor is determined according to the daily operating time and the starting frequency Z.
Three load classifications are considered depending on the mass acceleration factor.You can read off the service factor applicable to your application in following figure. The service factor selected using this diagram must be less than or equal to
The service factor as given in the performance parameter table.



启动频率Z：周期包括所有启动、制动次数以及变速电机高低速变化时的次数

Start frequency Z: The cycles includes all starting and braking procedures as well as change overs from low to high speed

负载类型 / Load classifications

负载性质：
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,permitted mass acceleration factor Fa≤0.2
B.Moderate shock load,permitted mass acceleration factor Fa≤3
C.Heavy shock load,permitted mass acceleration factor Fa≤10

轻负载的螺杆输送，风扇，装备线，输送带，小型搅拌器，电器，清洗机器，过滤器，控制驱动。
卷扬机，木工机器进料器，货物起重器，平衡器，绞螺纹机器，中型搅拌器
重型输送带，纹盘，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，震荡装置，破碎机。

Screw feeders for light materials,fans,assembly lines,conveyor belts for light materials,fillers,control machines.
Winding devices,woodworking machine feeders,goods lifts,balancers,threading machines,medium mixers,conveyor belts for heavy materials ,winches,sliding doors,fertilize scrapers,packing machines,mixers,conveyor belts for heavy materials,winches,sliding doors,fertilize scrapers,packing machines,concrete mixers,crane meterials,shears,presses,centrifuges,rotating supports,winches and lifts for heavy materials,grinding lathes,stone mills,bucker elevators,drilling machines,hammer mills,campresses,folding machines,turntables,tumbling barrels,vibrators,shredders.

惯性加速系数 / Mass acceleration factor

惯性加速系数计算如下：
Fa=Jc/Jm Fa惯性加速系数 Jc所有外部传动惯量（kgm^2）
Jm驱动电机的传动惯量（kgm^2）
如果惯性加速系数Fa＞10,请与我们技术部联系。
为了保持减速机的使用寿命，从产品样本中所选择的服务系数fs应等于或略高于计算出的服务系数fs

The mass acceleration factor is calculated as follows:
Fs=Jc/Jm Fa Mass acceleration factor
Jc All external mass moments of inertia（kgm^2）
Jm Mass moment of inertia on the motor end（kgm^2）
If mass acceleration factors fa＞10,please call our Technical Service.
To keep the service-life of gear units,use factor fsselected from the catalogue must be equal or Slightly higher than the calculated use factor fs.

举例 / Example

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使用系数fs≥1.48

Mass acceleration factor 2.5(load classification B),14hours/day operating time (read off at 16h/d)and 200 cycles/hour result in a service factor fs=1.48
Choose the service factor fs≥1.48 according to the parameter sheet

径向载荷和轴向载荷 / Overhung loads and axial forces

在决定影响径向载荷时，安装在轴端上的传动件类型必须考虑在内。不同类型的传动对应不同的传动附加系数fz，列表如下：

When determining the resulting radial loads,the type of transmission elements,mounted on the shaft end must be considered,Various tramsmissions corresponding with following transmission element factors fZ:

传动件 Transmission element	传动附加系数fz T染色mission element factor fz	注释 Comments
齿轮 Gears	1.15	<17齿 teeth
链轮 Chain sprockets	1.25	<20齿 teeth
	1.40	<13齿 teeth
V带轮 Narrow V-belt pulleys	1.75	有预紧力作用 Influence of the tensile force
平带轮 Flat belt pulleys	2.50	有预紧力作用 Influence of the tensile force
齿带轮 Toothed belt pulleys	2.50	有预紧力作用 Influence of the tensile force

作用在电机和齿轮轴上的径向载荷按如下公式计算：
The overhung loads exered on the motor or gear shaft is then calculated as follows.

$$Fr = \frac{M \cdot 2000 \cdot fz}{d_0} \ (N)$$

Fr 作用在轴上的载荷[N] Resulting radial load[N]
M 作用在轴上的扭矩[Nm] Torque on the shafts [Nm]
d_0 安装在轴上传动件的平均直径[mm] Mean diameter of the mounted transmission element in [mm] shaft
fz 传动附加系数 Transmission element factor

许用径向载荷时根据轴承额定使用寿命L10h来估算的（根据ISO0281）。对于特殊的运行条件，许用径向载荷时根据修正使用寿命Lna来确定。

The basis for determining the permitted radial loads is the computation of the rated service life L10h of the bearings(according to ISO0281)For special operating conditions, the permitted radial loads can be determined with regard service lifs Lna.

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点的许可值FxL（根据轴承的使用寿命）

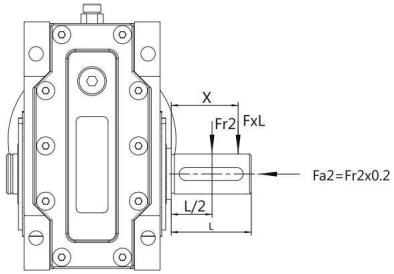
The permitted radial loads given in the selection tables must be calcuted using the following formula in the event of force application not in the center of the shaft end .The smaller of tow values FxL(according to bearing service life)

根据轴承的使用寿命公式/according to bearing service life:

$$FxL = Fr_{(1,2)} \cdot \frac{a}{b+x} [N]$$

Fr_1,Fr_2=性能参数表中的许用径向载荷(x=L/2)[N]
Permitted overhung load (x=L/2)for footmounted gear units according to he selection tables in [N]
X=从轴肩到受力点的距离[mm]Distance from the shaft shoulder to the force app;ication point in [mm]
a,b=减速机径向转化常量[mm]Gear unit constant for overhung load conversion[mm]

输出轴径向载荷/Output shafts radial loads

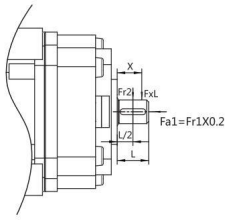


Fa2=输出轴向载荷 Output axial loads

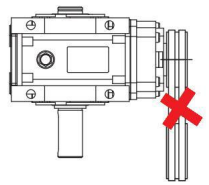
HKM减速机径向转化常量 / output shafts constants for overhung load conversion

	HKM0502	HKM0503	HKM0632	HKM0633	HKM0752	HKM0753	HKM0902	HKM0903	HKM1102	HKM1103
a	104	104	118	118	131	131	159	159	174	174
b	78	78	93	93	101	101	119	119	134	134

输入轴径向载荷/Input shafts radial loads



Fa1=输入轴向荷载 Input axial loads



输入结构 input structure
V带轮 Narrow V-belt pulleys
平带轮 Flat belt pulleys
齿带轮 Toothed belt pulleys

左视图的输入不被允许使用（包括三级输入）。
It is forbidden to use the input on the left(including 3stage inout)

HKM减速机径向转化常量 Input shafts constants for overhung load conversion

	HKM0502	HKM0503	HKM0632	HKM0633	HKM0752	HKM0753	HKM0902	HKM0903	HKM1102	HKM1103
A	51.5	56	90	56	73	70	81	70	101	87
B	40	44.5	43	44.5	53	55	61	55	76	67

HKM减速减速机选型表/GEAR UNIT SELECTION TABLES

HKM 050..减速机组合表（n_1 =1400r/min）
HKM 050..Possible geometrical combinations（n_1 =1400r/min）

130Nm

减速机型号 Gear units	i 公称 Nominal	i 实际 Actual	n_2 [r/min]	n_{2max} [Nm]	F_{r2} [N]	MV63	MV71	MV80	MV90
3级/Stage									
HKM0503	300	291.79	4.8	130	4100				
HKM0503	250	244.29	5.7	130	4100				
HKM0503	200	200.44	7	130	4100				
HKM0503	150	146.67	9.5	130	4000				
HKM0503	125	120.34	11.6	130	3770				
HKM0503	100	101.04	13.9	100	3560				
HKM0503	75	74.62	18.8	80	3220				
HKM0503	60	62.36	22	130	3030				
HKM0503	50	52.36	27	100	2860				
2级/Stage									
HKM0502	60	58.36	24	130	2960				
HKM0502	50	48.86	29	130	2790				
HKM0502	40	40.09	35	130	2610				
HKM0502	30	29.33	48	130	2350				
HKM0502	25	24.07	58	130	2200				
HKM0502	20	20.21	69	100	2080				
HKM0502	15	14.92	94	80	1880				
HKM0502	12.5	12.47	112	130	1770				
HKM0502	10	10.47	134	100	1670				
HKM0502	7.5	7.73	181	80	1510				

HKM减速减速机选型表/GEAR UNIT SELECTION TABLES

HKM 063..减速机组合表（n_1=1400r/min)
HKM 063..Possible geometrical combinations（n_1 =1400r/min）

200Nm

减速机型号 Gear units	i 公称 Nominal	i 实际 Actual	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	MV63	MV71	MV80	MV90
3级/Stage									
HKM0633	300	302.50	4.6	200	4800				
HKM0633	250	243.57	5.7	200	4800				
HKM0633	200	196.43	7.1	180	4800				
HKM0633	150	151.56	9.2	200	4650				
HKM0633	125	122.22	11.5	180	4330				
HKM0633	100	101.27	13.8	150	4070				
HKM0633	75	73.33	19.1	110	3650				
HKM0633	60	63.33	22	180	3480				
HKM0633	50	52.48	27	150	3270				
2级/Stage									
HKM0632	60	60.50	23	200	3430				
HKM0632	50	48.71	29	200	3190				
HKM0632	40	39.29	36	180	2970				
HKM0632	30	30.31	46	200	2720				
HKM0632	25	24.44	57	180	2530				
HKM0632	20	20.25	69	150	2380				
HKM0632	15	14.67	95	110	2130				
HKM0632	12.5	12.67	110	180	2030				
HKM0632	10	10.50	133	150	1910				
HKM0632	7.5	7.60	184	110	1710				

HKM减速减速机选型表/GEAR UNIT SELECTION TABLES

HKM 075..减速机组合表（n_1 =1400r/min）
HKM 075..Possible geometrical combinations（n_1 =1400r/min）

350Nm

减速机型号 Gear units	i 公称 Nominal	i 实际 Actual	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	MV63	MV71	MV80	MV90	MV100	MV112
3级/Stage											
HKM0753	300	297.21	4.7	350	6500	■	■				
HKM0753	250	240.89	5.8	350	6500	■	■				
HKM0753	200	200.66	7.0	300	6500	■	■				
HKM0753	150	151.2	9.3	350	6500	■	■	■			
HKM0753	125	125.95	11.1	300	5980	■	■	■			
HKM0753	100	99.22	14.1	240	5520	■	■	■			
HKM0753	75	75.45	18.6	200	5040	■	■	■			
HKM0753	60	62.43	22	300	4730		■	■	■		
HKM0753	50	49.18	28	240	4370		■	■	■		
2级/Stage											
HKM0752	60	59.44	24	350	4660		■	■	■		
HKM0752	50	48.18	29	350	4340		■	■	■		
HKM0752	40	40.13	35	300	4080		■	■	■		
HKM0752	30	30.24	46	350	3720			■	■	■	
HKM0752	25	25.19	56	300	3500			■	■	■	
HKM0752	20	19.84	71	240	3230			■	■	■	
HKM0752	15	15.09	93	200	2950			■	■	■	
HKM0752	12.5	12.49	112	300	2770				■	■	■
HKM0752	10	9.84	142	240	2550				■	■	■
HKM0752	7.5	7.48	187	200	2330				■	■	■

HKM减速减速机选型表/GEAR UNIT SELECTION TABLES

HKM 090..减速机组合表（n_1 =1400r/min）
HKM 090..Possible geometrical combinations（n_1 =1400r/min）

500Nm

减速机型号 Gear units	i 公称 Nominal	i 实际 Actual	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	MV63	MV71	MV80	MV90	MV100	MV112
3级/Stage											
HKM0903	300	295.18	4.7	500	8300	■	■				
HKM0903	250	240.89	5.8	500	8300	■	■	■			
HKM0903	200	200.66	7.0	480	8300	■	■	■			
HKM0903	150	151.20	9.3	500	8050	■	■	■			
HKM0903	125	125.95	11.1	480	7580	■	■	■	■		
HKM0903	100	99.22	14.1	380	7000	■	■	■	■		
HKM0903	75	75.45	18.6	300	6390	■	■	■	■		
HKM0903	60	62.43	22	480	6000		■	■	■		
HKM0903	50	49.18	28	380	5540		■	■	■		
2级/Stage											
HKM0902	60	59.04	24	500	5890		■	■	■		
HKM0902	50	48.18	29	500	5500		■	■	■		
HKM0902	40	40.13	35	480	5170			■	■	■	
HKM0902	30	30.24	46	500	4710			■	■	■	
HKM0902	25	25.19	56	480	4430			■	■	■	■
HKM0902	20	19.84	71	380	4090			■	■	■	■
HKM0902	15	15.09	93	300	3730			■	■	■	■
HKM0902	12.5	12.49	112	480	3510				■	■	■
HKM0902	10	9.84	142	380	3240				■	■	■
HKM0902	7.5	7.48	187	300	2950				■	■	■

HKM减速减速机选型表/GEAR UNIT SELECTION TABLES

HKM 110..减速机组合表（n_1=1400r/min）
HKM 110..Possible geometrical combinations（n_1=1400r/min）

750Nm

减速机型号 Gear units	i 公称 Nominal	i 实际 Actual	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	MV71	MV80	MV90	MV100	MV112	MV132
3级/Stage											
HKM1103	300	296.10	4.7	750	10000	■	■				
HKM1103	250	244.29	5.7	750	10000	■	■				
HKM1103	200	206.29	6.8	750	9920	■	■				
HKM1103	150	153.33	9.1	750	8980	■	■	■			
HKM1103	125	129.48	10.8	750	8490	■	■	■			
HKM1103	100	103.48	13.5	650	7880	■	■	■			
HKM1103	75	75.55	18.5	520	7090	■	■	■			
HKM1103	60	64.18	22	750	6720		■	■	■		
HKM1103	50	51.37	27	650	6240		■	■	■		
2级/Stage											
HKM1102	60	59.22	24	750	6540		■	■	■		
HKM1102	50	48.86	29	750	6130		■	■	■		
HKM1102	40	41.26	34	750	5800		■	■	■		
HKM1102	30	30.67	46	750	5250			■	■	■	
HKM1102	25	25.9	54	750	4960			■	■	■	■
HKM1102	20	20.73	68	650	4610			■	■	■	■
HKM1102	15	15.11	93	520	4150			■	■	■	■
HKM1102	12.5	12.84	109	750	3930				■	■	■
HKM1102	10	10.27	136	650	3650				■	■	■
HKM1102	7.5	7.49	187	520	3280				■	■	■

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.12	4.8	215	300	291.79	4100	0.6	HKM0503 63B5	6314
	5.7	180	250	244.29	4100	0.72		
	7	148	200	200.44	4100	0.88		
	9.5	108	150	146.67	4000	1.2		
	11.6	89	125	120.34	3770	1.5		
	13.9	74	100	101.04	3560	1.3		
	18.8	55	75	74.62	3220	1.5		
	22	46	60	62.36	3030	2.8		
	27	39	50	52.36	2860	2.6		
	24	44	60	58.36	2960	3.0	HKM0502 63B5	6314
	29	37	50	48.86	2790	3.5		
	35	30	40	40.09	2610	4.3		
	48	22	30	29.33	2350	5.9		
	58	18.1	25	24.07	2200	7.2		
	69	15.2	20	20.21	2080	6.6		
	94	11.2	15	14.92	1880	7.1		
	112	9.4	12.5	12.47	1770	13.8		
	134	7.9	10	10.47	1670	12.7		
	181	5.8	7.5	7.73	1510	13.7		
	4.6	223	300	302.5	4800	0.9	HKM0633 63B5	6314
	5.7	179	250	243.57	4800	1.1		
	7.1	145	200	196.43	4800	1.2		
	9.2	112	150	151.56	4650	1.8		
	11.5	90	125	122.22	4330	2.0		
	13.8	75	100	101.27	4070	2.0		
	19.1	54	75	73.33	3650	2.0		
	22	47	60	63.33	3480	3.9		
	27	39	50	52.48	3270	3.9		
	23	46	60	60.5	3420	4.4	HKM0632 63B5	6314
	29	37	50	48.71	3190	5.5		
	36	30	40	39.29	2970	6.1		
	46	23	30	30.31	2720	8.8		
	4.7	219	300	297.21	6500	1.6	HKM0753 63B5	6314
	5.8	177	250	240.89	6500	2.0		
	7.0	148	200	200.66	6500	2.0		
	9.3	111	150	151.2	6500	3.1		
	11.1	93	125	125.95	5980	3.2		
	14.1	73	100	99.22	5520	3.3		
	18.6	56	75	75.45	5040	3.6		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.12	4.7	217	300	295.18	8300	2.3	HKM0903 63B5	6314
	5.8	177	250	240.89	8300	2.8		
	7.0	148	200	200.66	8300	3.2		
	9.3	111	150	151.2	8050	4.5		
0.18	9.6	161	300	291.79	4000	0.81	HKM0503 63B5	6312
	11.5	135	250	244.29	3790	0.96		
	14.0	111	200	200.44	3550	1.2		
	19.1	81	150	146.67	3200	1.6		
	23	66	125	120.34	2990	2.0		
	28	56	100	101.04	2820	1.8		
	38	41	75	74.62	2550	1.9		
	45	34	60	62.36	2400	3.8		
	53	29	50	52.36	2270	3.5		
	11.6	133	125	120.34	3770	0.98	HKM0503 63B5	6324
	13.9	112	100	101.04	3560	0.9		
	18.8	82	75	74.62	3220	0.97		
	22	69	60	62.36	3030	1.9		
	27	58	50	52.36	2860	1.7		
	24	66	60	58.36	2960	2	HKM0502 63B5	6324
	29	55	50	48.86	2790	2.4		
	35	45	40	40.09	2610	2.9		
	48	33	30	29.33	2350	3.9		
	58	27	25	24.07	2200	4.8		
	69	23	20	20.21	2080	4.4		
	94	17.2	15	14.92	1880	4.7		
	14.4	107	60	62.36	3510	1.2	HKM0503 71B5/B14	7116
	17.2	90	50	52.36	3310	1.1		
	15.4	103	60	58.36	3430	1.3	HKM0502 71B5/B14	7116
	18.4	86	50	48.86	3240	1.5		
	22	70	40	40.09	3030	1.8		
	31	52	30	29.33	2730	2.5		
	37	42	25	24.07	2550	3.1		
	45	36	20	20.21	2410	2.8		
	60	26	15	14.92	2180	3.1		
	72	22	12.5	12.47	2050	5.9		
	86	18.4	10	10.47	1930	5.4		
	116	13.6	7.5	7.73	1750	5.9		
	9.3	167	300	302.50	4650	1.2	HKM0633 63B5	6312
	11.5	135	250	243.57	4330	1.5		
	14.3	109	200	196.43	4030	1.7		
	18.5	84	150	151.56	3690	2.4		
	23	68	125	122.22	3440	2.7		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.18	28	56	100	101.27	3230	2.7	HKM0633 63B5	6312
	38	41	75	73.33	2900	2.7		
	44	35	60	63.33	2760	5.1		
	53	29	50	52.48	2590	5.2		
	7.1	217	200	196.43	4800	0.83	HKM0633 63B5	6324
	9.2	167	150	151.56	4650	1.2		
	11.5	135	125	122.22	4330	1.3		
	13.8	112	100	101.27	4070	1.3		
	19.1	81	75	73.33	3650	1.4		
	22	70	60	63.33	3480	2.6		
	27	58	50	52.48	3270	2.6		
	23	68	60	60.50	3430	2.9	HKM0632 63B5	6324
	29	55	50	48.71	3190	3.6		
	36	44	40	39.29	2970	4.1		
	7.4	210	125	122.22	4800	0.86	HKM0633 71B5/B14	7116
	8.9	174	100	101.27	4720	0.86		
	12.3	126	75	73.33	4230	0.87		
	14.2	109	60	63.33	4030	1.7		
	17.1	90	50	52.48	3790	1.7		
	14.9	106	60	60.50	3970	1.9	HKM0632 71B5/B14	7116
	18.5	86	50	48.71	3690	2.3		
	23	69	40	39.29	3440	2.6		
	30	53	30	30.31	3150	3.8		
	37	43	25	24.44	2930	4.2		
	44	36	20	20.25	2760	4.2		
	61	26	15	14.67	2470	4.3		
	9.4	164	300	297.21	6320	2.1	HKM0753 63B5	6312
	11.6	133	250	240.89	5890	2.6		
	14.0	111	200	200.66	5540	2.7		
	18.5	84	150	151.20	5040	4.2		
	4.7	328	300	297.21	6500	1.1	HKM0753 63B5	6324
	5.8	266	250	240.89	6500	1.3		
	7.0	222	200	200.66	6500	1.4		
	9.3	167	150	151.20	6500	2.1		
	11.1	139	125	125.95	5980	2.2		
	14.1	110	100	99.22	5520	2.2		
	18.6	83	75	75.45	5040	2.4		
	3.7	414	250	240.89	6500	0.85	HKM0753 71B5/B14	7116
	4.5	345	200	200.66	6500	0.87		
	6.0	260	150	151.20	6500	1.3		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.18	7.1	217	125	125.95	6500	1.4	HKM0753 71B5/B14	7116
	9.1	171	100	99.22	6400	1.4		
	11.9	130	75	75.45	5840	1.5		
	14.4	107	60	62.43	5480	2.8		
	18.3	85	50	49.18	5060	2.8		
	15.1	107	60	59.44	5390	3.4	HKM0752 71B5/B14	7116
	18.7	85	50	48.18	5030	4.1		
	22	71	40	40.13	4730	4.3		
	9.5	163	300	295.18	7990	3.1	HKM0903 63B5	6312
	11.6	133	250	240.89	7470	3.8		
	14.0	111	200	200.66	7030	4.3		
	4.7	326	300	295.18	8300	1.5	HKM0903 63B5	6324
	5.8	266	250	240.89	8300	1.9		
	7.0	222	200	200.66	8300	2.2		
	9.3	167	150	151.20	8050	3.0		
	11.1	139	125	125.95	7580	3.4		
	14.1	110	100	99.22	7000	3.5		
	18.6	83	75	75.45	6390	3.6		
	3.0	507	300	295.18	8300	1.0	HKM0903 71B5/B14	7116
	3.7	414	250	240.89	8300	1.2		
	4.5	345	200	200.66	8300	1.4		
	6.0	260	150	151.20	8300	1.9		
	7.1	217	125	125.95	8300	2.2		
	9.1	171	100	99.22	8110	2.2		
	11.9	130	75	75.45	7400	2.3		
	14.4	107	60	62.43	6950	4.5		
	18.3	85	50	49.18	6420	4.5		
	3.0	520	300	296.10	10000	1.5	HKM1103 71B5/B14	7116
	3.7	420	250	244.29	10000	1.8		
	4.4	355	200	206.29	10000	2.1		
	5.9	264	150	153.33	10000	2.8		
	7.0	223	125	129.48	9840	3.4		
	8.7	178	100	103.64	9130	3.6		
	11.9	130	75	75.55	8220	4.0		
0.25	19.1	113	150	146.67	3200	1.2	HKM0503 63B5	6322
	23	92	125	120.34	2990	1.4		
	28	78	100	101.04	2820	1.3		
	38	57	75	74.62	2550	1.4		
	45	48	60	62.36	2400	2.7		
	53	40	50	52.36	2270	2.5		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.25	22	96	60	62.36	3030	1.4	HKM0503 71B5/B14	7114
	27	80	50	52.36	2860	1.2		
	24	92	60	58.36	2960	1.4	HKM0502 71B5/B14	7114
	29	77	50	48.86	2790	1.7		
	35	63	40	40.09	2610	2.1		
	48	46	30	29.33	2350	2.8		
	58	38	25	24.07	2200	3.4		
	69	32	20	20.21	2080	3.2		
	94	23	15	14.92	1880	3.4		
	15.4	142	60	58.36	3430	0.9	HKM0502 71B5/B14	7126
	18.4	119	50	48.86	3240	1.1		
	22	98	40	40.09	3030	1.3		
	31	72	30	29.33	2730	1.8		
	37	59	25	24.07	2550	2.2		
	45	49	20	20.21	2410	2.0		
	60	36	15	14.92	2180	2.2		
	72	30	12.5	12.47	2050	4.3		
	86	26	10	10.47	1930	3.9		
	116	19	7.5	7.73	1750	4.2		
	9.3	232	300	302.50	4650	0.86	HKM0633 63B5	6322
	11.5	187	250	243.57	4330	1.1		
	14.3	151	200	196.43	4030	1.2		
	18.5	116	150	151.56	3690	1.7		
	23	94	125	122.22	3440	1.9		
	28	78	100	101.27	3230	1.9		
	38	56	75	73.33	2900	2.0		
	44	49	60	63.33	2760	3.7		
	53	40	50	52.48	2590	3.7		
	9.2	233	150	151.56	4650	0.86	HKM0633 71B5/B14	7114
	11.5	188	125	122.22	4330	0.96		
	13.8	155	100	101.27	4070	0.97		
	19.1	113	75	73.33	3650	1.0		
	22	97	60	63.33	3480	1.9		
	27	81	50	52.48	3270	1.9		
	23	95	60	60.50	3430	2.1	HKM0632 71B5/B14	7114
	29	76	50	48.71	3190	2.6		
	36	62	40	39.29	2970	2.9		
	46	48	30	30.31	2720	4.2		
	14.2	151	60	63.33	4030	1.2	HKM0633 71B5/B14	7126
	17.1	125	50	52.48	3790	1.2		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.25	14.9	148	60	60.50	3970	1.4	HKM0632 71B5/B14	7126
	18.5	119	50	48.71	3690	1.7		
	23	96	40	39.29	3440	1.9		
	30	74	30	30.31	3150	2.7		
	37	60	25	24.44	2930	3.0		
	44	49	20	20.25	2760	3.0		
	61	36	15	14.67	2470	3.1		
	9.4	228	300	297.21	6320	1.5	HKM0753 63B5	6322
	11.6	185	250	240.89	5890	1.9		
	14.0	154	200	200.66	5540	1.9		
	18.5	116	150	151.20	5040	3.0		
	22	97	125	125.95	4750	3.1		
	28	76	100	99.22	4380	3.2		
	37	58	75	75.45	4000	3.5		
	5.8	370	250	240.89	6500	0.95	HKM0753 71B5/B14	7114
	7.0	308	200	200.66	6500	1.0		
	9.3	232	150	151.20	6500	1.5		
	11.1	193	125	125.95	5980	1.6		
	14.1	152	100	99.22	5520	1.6		
	18.6	116	75	75.45	5040	1.7		
	22	96	60	62.43	4730	3.1		
	28	75	50	49.18	4370	3.2		
	24	93	60	59.44	4660	3.8	HKM0752 71B5/B14	7114
	29	76	50	48.18	4340	4.6		
	6.0	361	150	151.20	6500	0.97	HKM0753 71B5/B14	7126
	7.1	301	125	125.95	6500	1.0		
	9.1	237	100	99.22	6400	1.0		
	11.9	180	75	75.45	5840	1.1		
	14.4	149	60	62.43	5480	2.0		
	18.3	117	50	49.18	5060	2.0		
	15.1	145	60	59.44	5390	2.4	HKM0752 71B5/B14	7126
	18.7	118	50	48.18	5030	3.0		
	22	98	40	40.13	4730	3.1		
	9.5	227	300	295.18	7990	2.2	HKM0903 63B5	6322
	11.6	185	250	240.89	7470	2.7		
	14.0	154	200	200.66	7030	3.1		
	18.5	116	150	151.20	6390	4.3		
	4.7	453	300	295.18	8300	1.1	HKM0903 71B5/B14	7114
	5.8	370	250	240.89	8300	1.4		
	7.0	308	200	200.66	8300	1.6		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.25	9.3	232	150	151.20	8050	2.2	HKM0903 71B5/B14	7114
	11.1	193	125	125.95	7580	2.5		
	14.1	152	100	99.22	7000	2.5		
	18.6	116	75	75.45	6390	2.6		
	22	96	60	62.43	6000	5.0		
	28	75	50	49.18	5540	5.0		
	3.0	705	300	295.18	8300	0.71	HKM0903 71B5/B14	7126
	3.7	575	250	240.89	8300	0.9		
	4.5	479	200	200.66	8300	1.0		
	6.0	361	150	151.20	8300	1.4		
	7.1	301	125	125.95	8300	1.6		
	9.1	237	100	99.22	8110	1.6		
	11.9	180	75	75.45	7400	1.7		
	14.4	149	60	62.43	6950	3.2		
	18.3	117	50	49.18	6420	3.2		
	15.2	144	60	59.04	6820	3.5	HKM0902 71B5/B14	7126
	18.7	118	50	48.18	6370	4.3		
	4.7	454	300	296.10	10000	1.7	HKM1103 71B5/B14	7114
	5.7	375	250	244.29	10000	2.0		
	6.8	317	200	206.29	9920	2.4		
	9.1	235	150	153.33	8980	3.2		
	10.8	199	125	129.48	8490	3.8		
	13.5	159	100	103.64	7880	4.1		
	3.0	707	300	296.10	10000	1.1	HKM1103 71B5/B14	7126
	3.7	583	250	244.29	10000	1.3		
	4.4	493	200	206.29	10000	1.5		
	5.9	366	150	153.33	10000	2.0		
	7.0	309	125	129.48	9840	2.4		
	8.7	247	100	103.64	9130	2.6		
	11.9	180	75	75.55	8220	2.9		
0.37	23	137	125	120.34	2990	0.95	HKM0503 71B5/B14	7112
	28	115	100	101.04	2820	0.87		
	38	85	75	74.62	2550	0.94		
	45	71	60	62.36	2400	1.8		
	53	59	50	52.36	2270	1.7		
	24	136	60	58.36	2960	0.96	HKM0502 71B5/B14	7124
	29	113	50	48.86	2790	1.1		
	35	93	40	40.09	2610	1.4		
	48	68	30	29.33	2350	1.9		
	58	56	25	24.07	2200	2.3		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.37	69	47	20	20.21	2080	2.1	HKM0502 71B5/B14	7124
	94	35	15	14.92	1880	2.3		
	112	29	12.5	12.47	1770	4.5		
	134	24	10	10.47	1670	4.1		
	181	17.9	7.5	7.73	1510	4.5		
	22	145	40	40.09	3030	0.9	HKM0502 80B5/B14	8016
	31	106	30	29.33	2730	1.2		
	37	87	25	24.07	2550	1.5		
	45	73	20	20.21	2410	1.4		
	60	54	15	14.92	2180	1.5		
	72	45	12.5	12.47	2050	2.9		
	86	38	10	10.47	1930	2.6		
	116	28	7.5	7.73	1750	2.9		
	18.5	172	150	151.56	3690	1.2	HKM0633 71B5/B14	7112
	23	139	125	122.22	3440	1.3		
	28	115	100	101.27	3230	1.3		
	38	83	75	73.33	2900	1.3		
	44	72	60	63.33	2760	2.5		
	53	60	50	52.48	2590	2.5		
	22	144	60	63.33	3480	1.3	HKM0633 71B5/B14	7124
	27	119	50	52.48	3270	1.3		
	23	140	60	60.50	3430	1.4	HKM0632 71B5/B14	7124
	29	113	50	48.71	3190	1.8		
	36	91	40	39.29	2970	2.0		
	46	70	30	30.31	2720	2.8		
	57	57	25	24.44	2530	3.2		
	69	47	20	20.25	2380	3.2		
	95	34	15	14.67	2130	3.2		
	14.9	219	60	60.50	3970	0.92	HKM0632 80B5/B14	8016
	18.5	176	50	48.71	3690	1.1		
	23	142	40	39.29	3440	1.3		
	30	109	30	30.31	3150	1.8		
	37	88	25	24.44	2930	2.0		
	44	73	20	20.25	2760	2.1		
	61	53	15	14.67	2470	2.1		
	71	46	12.5	12.67	2360	3.9		
	86	38	10	10.50	2210	4.0		
	118	27	7.5	7.60	1990	4.0		
	9.4	338	300	297.21	6320	1.0	HKM0753 71B5/B14	7112
	11.6	274	250	240.89	5890	1.3		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.37	14.0	228	200	200.66	5540	1.3	HKM0753 71B5/B14	7112
	18.5	172	150	151.20	5040	2.0		
	22	143	125	125.95	4750	2.1		
	28	113	100	99.22	4380	2.1		
	37	86	75	75.45	4000	2.3		
	45	71	60	62.43	3750	4.2		
	57	56	50	49.18	3470	4.3		
	9.3	343	150	151.20	6500	1.0	HKM0753 71B5/B14	7124
	11.1	286	125	125.95	5980	1.0		
	14.1	225	100	99.22	5520	1.1		
	18.6	171	75	75.45	5040	1.2		
	22	142	60	62.43	4730	2.1		
	28	112	50	49.18	4370	2.1		
	24	138	60	59.44	4660	2.5	HKM0752 71B5/B14	7124
	29	112	50	48.18	4340	3.1		
	35	93	40	40.13	4080	3.2		
	14.4	221	60	62.43	5480	1.4	HKM0753 80B5/B14	8016
	18.3	174	50	49.18	5060	1.4		
	15.1	215	60	59.44	5390	1.6	HKM0752 80B5/B14	8016
	18.7	174	50	48.18	5030	2.0		
	22	145	40	40.13	4730	2.1		
	30	109	30	30.24	4310	3.2		
	36	91	25	25.19	4050	3.3		
	45	72	20	19.84	3740	3.3		
	60	55	15	15.09	3410	3.7		
	9.5	335	300	295.18	7990	1.5	HKM0903 71B5/B14	7112
	11.6	274	250	240.89	7470	1.8		
	14.0	228	200	200.66	7030	2.1		
	18.5	172	150	151.20	6390	2.9		
	22	143	125	125.95	6010	3.4		
	28	113	100	99.22	5550	3.4		
	37	86	75	75.45	5070	3.5		
	4.7	671	300	295.18	8300	0.75	HKM0903 71B5/B14	7124
	5.8	547	250	240.89	8300	0.91		
	7.0	456	200	200.66	8300	1.1		
	9.3	343	150	151.20	8050	1.5		
	11.1	286	125	125.95	7580	1.7		
	14.1	225	100	99.22	7000	1.7		
	18.6	171	75	75.45	6390	1.8		
	22	142	60	62.43	6000	3.4		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.37	28	112	50	49.18	5540	3.4	HKM0903 71B5/B14	7124
	24	137	60	59.04	5890	3.6	HKM0902 71B5/B14	7124
	29	112	50	48.18	5500	4.5		
	6.0	534	150	151.20	8300	0.94	HKM0903 80B5/B14	8016
	7.1	445	125	125.95	8300	1.1		
	9.1	351	100	99.22	8110	1.1		
	11.9	267	75	75.45	7400	1.1		
	14.4	221	60	62.43	6950	2.2		
	18.3	174	50	49.18	6420	2.2		
	15.2	213	60	59.04	6820	2.3	HKM0902 80B5/B14	8016
	18.7	174	50	48.13	6370	2.9		
	22	145	40	40.13	6000	3.3		
	9.5	336	300	296.10	8880	2.2	HKM1103 71B5/B14	7112
	11.5	277	250	244.29	8330	2.7		
	13.6	234	200	206.29	7870	3.2		
	18.3	174	150	153.33	7130	4.3		
	4.7	673	300	296.10	10000	1.1	HKM1103 71B5/B14	7124
	5.7	555	250	244.29	10000	1.4		
	6.8	469	200	206.29	9920	1.6		
	9.1	348	150	153.33	8980	2.2		
	10.8	294	125	129.48	8490	2.5		
	13.5	235	100	103.64	7880	2.8		
	18.5	172	75	75.55	7090	3.0		
	4.4	729	200	206.29	10000	1.0	HKM1103 80B5/B14	8016
	5.9	542	150	153.33	10000	1.4		
	7.0	458	125	129.48	9840	1.6		
	8.7	366	100	103.64	9130	1.8		
	11.9	267	75	75.55	8220	1.9		
	14.0	227	60	64.18	7780	3.3		
	17.5	182	50	51.37	7230	3.6		
	15.2	214	60	59.22	7580	3.5	HKM1102 80B5/B14	8016
	18.4	176	50	48.86	7110	4.2		
0.55	45	105	60	62.36	2400	1.2	HKM0503 71B5/B14	7122
	53	88	50	52.36	2270	1.1		
	35	138	40	40.09	2610	0.94	HKM0502 80B5/B14	8014
	48	101	30	29.33	2350	1.3		
	58	83	25	24.07	2200	1.6		
	69	70	20	20.21	2080	1.4		
	94	51	15	14.92	1880	1.6		
	112	43	12.5	12.47	1770	3.0		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.55	134	36	10	10.47	1670	2.8	HKM0502 80B5/B14	8014
	181	27	7.5	7.73	1510	3.0		
	37	129	25	24.07	2550	1.0	HKM0502 80B5/B14	8026
	45	109	20	20.21	2410	0.92		
	60	80	15	14.92	2180	1.0		
	72	67	12.5	12.47	2050	1.9		
	86	56	10	10.47	1930	1.8		
	116	42	7.5	7.73	1750	1.9		
	23	206	125	122.22	3440	0.87	HKM0633 71B5/B14	7122
	28	171	100	101.27	3230	0.88		
	38	124	75	73.33	2900	0.9		
	44	107	60	63.33	2760	1.7		
	53	89	50	52.48	2590	1.7		
	23	209	60	60.50	3430	0.96	HKM0632 80B5/B14	8014
	29	168	50	48.71	3190	1.2		
	36	136	40	39.29	2970	1.3		
	46	105	30	30.31	2720	1.9		
	57	84	25	24.44	2530	2.1		
	69	70	20	20.25	2380	2.1		
	95	51	15	14.67	2130	2.2		
	110	44	12.5	12.67	2030	4.1		
	133	36	10	10.50	1910	4.1		
	184	26	7.5	7.60	1710	4.2		
	23	216	40	39.29	3440	0.85	HKM0632 80B5/B14	8026
	30	163	30	30.31	3150	1.2		
	37	131	25	24.44	2930	1.4		
	44	109	20	20.25	2760	1.4		
	61	79	15	14.67	2470	4.4		
	71	68	12.5	12.67	2360	2.6		
	86	56	10	10.50	2210	2.7		
	118	41	7.5	7.60	1990	2.7		
	11.6	407	250	240.89	5890	0.86	HKM0753 71B5/B14	7122
	14.0	339	200	200.66	5540	0.9		
	18.5	255	150	151.20	5040	1.4		
	22	213	125	125.95	4750	1.4		
	28	168	100	99.22	4380	1.4		
	37	127	75	75.45	4000	1.6		
	45	105	60	62.43	3750	2.8		
	57	83	50	49.18	3470	2.9		
	18.6	255	75	75.45	5040	0.8	HKM0753 80B5/B14	8014

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.55	22	211	60	62.43	4730	1.4	HKM0753 80B5/B14	8014
	28	166	50	49.18	4370	1.4		
	24	205	60	59.44	4660	1.7	HKM0752 80B5/B14	8014
	29	166	50	48.18	4340	2.1		
	35	139	40	40.13	4080	2.2		
	46	104	30	30.24	3720	3.4		
	56	87	25	25.19	3500	3.5		
	71	68	20	19.84	3230	3.5		
	93	52	15	15.09	2950	3.8		
	14.4	328	60	62.43	5480	0.91	HKM0753 80B5/B14	8026
	18.3	258	50	49.18	5060	0.93		
	15.1	319	60	59.44	5390	1.1	HKM0752 80B5/B14	8026
	18.7	259	50	48.18	5030	1.4		
	22	215	40	40.13	4730	1.4		
	30	162	30	30.24	4310	2.2		
	36	135	25	25.19	4050	2.2		
	45	107	20	19.84	3740	2.3		
	60	81	15	15.09	3410	2.5		
	9.5	498	300	295.18	7990	1.0	HKM0903 71B5/B14	7122
	11.6	407	250	240.89	7470	1.2		
	14.0	339	200	200.66	7030	1.4		
	18.5	255	150	151.20	6390	2.0		
	22	213	125	125.95	6010	2.3		
	28	168	100	99.22	5550	2.3		
	37	127	75	75.45	5070	2.4		
	45	105	60	62.43	4760	4.6		
	57	83	50	49.18	4390	4.6		
	9.3	511	150	151.20	8050	1.0	HKM0903 80B5/B14	8014
	11.1	425	125	125.95	7580	1.1		
	14.1	335	100	99.22	7000	1.1		
	18.6	255	75	75.45	6390	1.2		
	22	211	60	62.43	6000	2.3		
	28	166	50	49.18	5540	2.3		
	24	204	60	59.04	5890	2.5	HKM0902 80B5/B14	8014
	29	166	50	48.18	5500	3.0		
	35	139	40	40.13	5170	3.5		
	46	104	30	30.24	4710	4.8		
	14.4	328	60	62.43	6950	1.5	HKM0903 80B5/B14	8026
	18.3	258	50	49.18	6420	1.5		
	15.2	317	60	59.04	6820	1.6	HKM0902 80B5/B14	8026

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.55	18.7	259	50	48.18	6370	1.9	HKM0902 80B5/B14	8026
	22	215	40	40.13	6000	2.2		
	30	162	30	30.24	5460	3.1		
	36	135	25	25.19	5130	3.5		
	45	107	20	19.84	4740	3.6		
	60	81	15	15.09	4330	3.7		
	9.5	500	300	296.10	8880	1.5	HKM1103 71B5/B14	7122
	11.5	412	250	244.29	8330	1.8		
	13.6	348	200	206.29	7870	2.2		
	18.3	259	150	153.33	7130	2.9		
	22	219	125	129.48	6740	3.4		
	27	175	100	103.64	6260	3.7		
	37	128	75	75.55	5630	4.1		
	5.7	825	250	244.29	10000	0.91	HKM1103 80B5/B14	8014
	6.8	697	200	206.29	9920	1.1		
	9.1	518	150	153.33	8980	1.4		
	10.8	437	125	129.48	8490	1.7		
	13.5	350	100	103.64	7880	1.9		
	18.5	255	75	75.55	7090	2.0		
	22	217	60	64.18	6720	3.5		
	27	173	50	51.37	6240	3.7		
	24	204	60	59.22	6540	3.7	HKM1102 80B5/B14	8014
	29	169	50	48.86	6130	4.4		
	5.9	805	150	153.33	10000	0.93	HKM1103 80B5/B14	8026
	7.0	680	125	129.48	9840	1.1		
	8.7	544	100	103.64	9130	1.2		
	11.9	397	75	75.55	8220	1.3		
	14.0	337	60	64.18	7780	2.2		
	17.5	270	50	51.37	7230	2.4		
	15.2	318	60	59.22	7580	2.4	HKM1102 80B5/B14	8026
	18.4	262	50	48.86	7110	2.9		
	22	222	40	41.26	6720	3.4		
	29	165	30	30.67	6090	4.6		
0.75	48	138	30	29.33	2350	0.94	HKM0502 80B5/B14	8024
	58	113	25	24.07	2200	1.1		
	69	95	20	20.21	2080	1.1		
	94	70	15	14.92	1880	1.1		
	112	59	12.5	12.47	1770	2.2		
	134	49	10	10.47	1670	2.0		
	181	36	7.5	7.73	1510	2.2		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.75	72	91	12.5	12.47	2050	1.4	HKM0502 90B5/B14	90S6
	86	77	10	10.47	1930	1.3		
	116	57	7.5	7.73	1750	1.4		
	44	146	60	63.33	2760	1.2	HKM0633 80B5/B14	8012
	53	121	50	52.48	2590	1.2		
	29	229	50	48.71	3190	0.87	HKM0632 80B5/B14	8024
	36	185	40	39.29	2970	0.97		
	46	143	30	30.31	2720	1.4		
	57	115	25	24.44	2530	1.6		
	69	95	20	20.25	2380	1.6		
	95	69	15	14.67	2130	1.6		
	110	60	12.5	12.67	2030	3.0		
	133	49	10	10.50	1910	3.0		
	184	36	7.5	7.60	1710	3.1		
	30	222	30	30.31	3150	0.9	HKM0632 90B5/B14	90S6
	37	179	25	24.44	2930	1.0		
	44	148	20	20.25	2760	1.0		
	61	107	15	14.67	2470	1.0		
	71	93	12.5	12.67	2360	1.9		
	86	77	10	10.50	2210	2.0		
	118	56	7.5	7.60	1990	2.0		
	18.5	348	150	151.20	5040	1.0	HKM0753 80B5/B14	8012
	22	290	125	125.95	4750	1.0		
	28	228	100	99.22	4380	1.1		
	37	174	75	75.45	4000	1.2		
	45	144	60	62.43	3750	2.1		
	57	113	50	49.18	3470	2.1		
	22	287	60	62.43	4730	1.0	HKM0753 80B5/B14	8024
	28	226	50	49.18	4370	1.1		
	24	280	60	59.44	4660	1.3	HKM0752 80B5/B14	8024
	29	227	50	48.18	4340	1.5		
	35	189	40	40.13	4080	1.6		
	46	142	30	30.24	3720	2.5		
	56	119	25	25.19	3500	2.5		
	71	93	20	19.84	3230	2.6		
	93	71	15	15.09	2950	2.8		
	18.7	353	50	48.18	5030	1.0	HKM0752 90B5/B14	90S6
	22	294	40	40.13	4730	1.0		
	30	221	30	30.24	4310	1.6		
	36	184	25	25.19	4050	1.6		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.75	45	145	20	19.84	3740	1.7	HKM0752 90B5/B14	90S6
	60	110	15	15.09	3410	1.8		
	72	91	12.5	12.49	3210	3.3		
	91	72	10	9.84	2960	3.3		
	120	55	7.5	7.48	2700	3.7		
	11.6	555	250	240.89	7470	0.9	HKM0903 80B5/B14	8012
	14.0	462	200	200.66	7030	1.0		
	18.5	348	150	151.20	6390	1.4		
	22	290	125	125.95	6010	1.7		
	28	228	100	99.22	5550	1.7		
	37	174	75	75.45	5070	1.7		
	45	144	60	62.43	4760	3.3		
	57	113	50	49.18	4390	3.4		
	11.1	580	125	125.95	7580	0.83	HKM0903 80B5/B14	8024
	14.1	457	100	99.22	7000	0.83		
	18.6	247	75	75.45	6390	0.86		
	22	287	60	62.43	6000	1.7		
	28	226	50	49.18	5540	1.7		
	24	278	60	59.04	5890	1.8	HKM0902 80B5/B14	8024
	29	227	50	48.18	5500	2.2		
	35	189	40	40.13	5170	2.5		
	46	142	30	30.24	4710	3.5		
	56	119	25	25.19	4430	4.0		
	71	93	20	19.84	4090	4.1		
	93	71	15	15.09	3730	4.2		
	14.4	447	60	62.43	6950	1.1	HKM0903 90B5/B14	90S6
	18.3	352	50	49.18	6420	1.1		
	15.2	432	60	59.04	6820	1.2	HKM0902 90B5/B14	90S6
	18.7	353	50	48.18	6370	1.4		
	22	294	40	40.13	6000	1.6		
	30	221	30	30.24	5460	2.3		
	36	184	25	25.19	5130	2.6		
	45	145	20	19.84	4740	2.6		
	60	110	15	15.09	4330	2.7		
	9.5	682	300	296.10	8880	1.1	HKM1103 80B5/B14	8012
	11.5	562	250	244.29	8330	1.3		
	13.6	475	200	206.29	7870	1.6		
	18.3	353	150	153.33	7130	2.1		
	22	298	125	129.48	6740	2.5		
	27	239	100	103.64	6260	2.7		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
0.75	37	174	75	75.55	5630	3.0	HKM1103 80B5/B14	8012
	9.1	706	150	153.33	8980	1.1	HKM1103 80B5/B14	8024
	10.8	596	125	129.48	8490	1.3		
	13.5	477	100	103.64	7880	1.4		
	18.5	348	75	75.55	7090	1.5		
	22	296	60	64.18	6720	2.5		
	27	237	50	51.37	6240	2.7		
	24	279	60	59.22	6540	2.7	HKM1102 80B5/B14	8024
	29	230	50	48.86	6130	3.3		
	34	194	40	41.26	5800	3.9		
	8.7	742	100	103.64	9130	0.88	HKM1103 90B5/B14	90S6
	11.9	541	75	75.55	8220	0.96		
	14.0	460	60	64.18	7780	1.6		
	17.5	368	50	51.37	7230	1.8		
	15.2	434	60	59.22	7580	1.7	HKM1102 90B5/B14	90S6
	18.4	358	50	48.86	7110	2.1		
	22	302	40	41.26	6720	2.5		
	29	225	30	30.67	6090	3.3		
	35	190	25	25.90	5750	4.0		
	43	152	20	20.73	5340	4.3		
1.1	112	86	12.5	12.47	1770	1.5	HKM0502 90B5/B14	90S4
	134	72	10	10.47	1670	1.4		
	181	53	7.5	7.73	1510	1.5		
	72	134	12.5	12.47	2050	0.97	HKM0502 90B5/B14	90L6
	86	112	10	10.47	1930	0.89		
	116	83	7.5	7.73	1750	0.96		
	46	209	30	30.31	2720	0.96	HKM0632 90B5/B14	90S4
	57	169	25	24.44	2530	1.1		
	69	140	20	20.25	2380	1.1		
	95	101	15	14.67	2130	1.1		
	110	87	12.5	12.67	2030	2.1		
	133	72	10	10.50	1910	2.1		
	184	52	7.5	7.60	1710	2.1		
	71	136	12.5	12.67	2360	1.3	HKM0632 90B5/B14	90L6
	86	113	10	10.50	2210	1.3		
	118	82	7.5	7.60	1990	1.3		
	45	211	60	62.43	3750	1.4	HKM0753 80B5/B14	8022
	57	166	50	49.18	3470	1.4		
	24	410	60	59.44	4660	0.85	HKM0752 90B5/B14	90S4
	29	333	50	48.18	4340	1.1		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
1.1	35	277	40	40.13	4080	1.1	HKM0752 90B5/B14	90S4
	46	209	30	30.24	3720	1.7		
	56	174	25	25.19	3500	1.7		
	71	137	20	19.84	3230	1.8		
	93	104	15	15.09	2950	1.9		
	112	86	12.5	12.49	2770	3.5		
	142	68	10	9.84	2550	3.5		
	187	52	7.5	7.48	2330	3.9		
	30	325	30	30.24	4310	1.1	HKM0752 90B5/B14	90L6
	36	271	25	25.19	4050	1.1		
	45	213	10	19.84	3740	1.1		
	60	162	15	15.09	3410	1.2		
	72	134	12.5	12.49	3210	2.2		
	91	106	10	9.84	2960	2.3		
	120	80	7.5	7.48	2700	2.5		
	18.5	511	150	151.20	6390	1.0	HKM0903 80B5/B14	8022
	22	425	125	125.95	6010	1.1		
	28	335	100	99.22	5550	1.1		
	37	255	75	75.45	5070	1.2		
	45	211	60	62.43	4760	2.3		
	57	166	50	49.18	4390	2.3		
	22	422	60	62.43	6000	1.1	HKM0903 90B5/B14	90S4
	28	332	50	49.18	5540	1.1		
	24	408	60	59.04	5890	1.2	HKM0902 90B5/B14	90S4
	29	333	50	48.18	5500	1.5		
	35	277	40	40.13	5170	1.7		
	46	209	30	30.24	4710	2.4		
	56	174	25	25.19	4430	2.8		
	71	137	20	19.84	4090	2.8		
	93	104	15	15.09	3730	2.9		
	15.2	634	60	59.04	6820	0.8	HKM0902 90B5/B14	90L6
	18.7	517	50	48.18	6370	0.97		
	22	431	40	40.13	6000	1.1		
	30	325	30	30.24	5460	1.5		
	36	271	25	25.19	5130	1.8		
	45	213	20	19.84	4740	1.8		
	60	162	15	15.09	4330	1.9		
	72	134	12.5	12.49	4060	3.6		
	91	106	10	9.84	3750	3.6		
	120	80	7.5	7.48	3420	3.7		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
1.1	11.5	825	250	244.29	8330	0.91	HKM1103 80B5/B14	8022
	13.6	697	200	206.29	7870	1.1		
	18.3	518	150	153.33	7130	1.4		
	22	437	125	129.48	6740	1.7		
	27	350	100	103.64	6260	1.9		
	37	255	75	75.55	5630	2.0		
	44	217	60	64.18	5330	3.5		
	55	173	50	51.37	4950	3.7		
	10.8	874	125	129.48	8490	0.86	HKM1103 90B5/B14	90S4
	13.5	700	100	103.64	7880	0.93		
	18.5	510	75	75.55	7090	1.0		
	22	433	60	64.18	6720	1.7		
	27	347	50	51.37	6240	1.9		
	24	409	60	59.22	6540	1.8	HKM1102 90B5/B14	90S4
	29	337	50	48.86	6130	2.2		
	34	285	40	41.26	5800	2.6		
	46	212	30	30.67	5250	3.5		
	54	179	25	25.90	4960	4.2		
	68	143	20	20.73	4610	4.5		
	14.0	674	60	64.18	7780	1.1	HKM1103 90B5/B14	90L6
	17.5	540	50	51.37	7230	1.2		
	15.2	636	60	59.22	7580	1.2	HKM1102 90B5/B14	90L6
	18.4	525	50	48.86	7110	1.4		
	22	443	40	41.26	6720	1.7		
	29	329	30	30.67	6090	2.3		
	35	278	25	25.90	5750	2.7		
	43	223	20	20.73	5340	2.9		
	60	162	15	15.11	4810	3.2		
1.5	112	117	12.5	12.47	1770	1.1	HKM0502 90B5/B14	90L4
	134	99	10	10.47	1670	1.0		
	181	73	7.5	7.73	1510	1.1		
	57	230	25	24.44	2530	0.8	HKM0632 90B5/B14	90L4
	69	191	20	20.25	2380	0.8		
	95	138	15	14.67	2130	0.8		
	110	119	12.5	12.67	2030	1.5		
	133	99	10	10.50	1910	1.5		
	184	72	7.5	7.60	1710	1.5		
	45	287	60	62.43	3750	1.0	HKM0753 90B5/B14	90S2
	57	226	50	49.18	3470	1.1		
	29	454	50	48.18	4340	0.77	HKM0752 90B5/B14	90L4

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
1.5	35	378	40	40.13	4080	0.79	HKM0752 90B5/B14	90L4
	46	285	30	30.24	3720	1.2		
	56	237	25	25.19	3500	1.3		
	71	187	20	19.84	3230	1.3		
	93	142	15	15.09	2950	1.4		
	112	118	12.5	12.49	2770	2.6		
	142	93	10	9.84	2550	2.6		
	187	70	7.5	7.48	2330	2.8		
	45	291	20	19.84	3740	0.83	HKM0752 100B5/B14	100L6
	60	221	15	15.09	3410	0.91		
	72	183	12.5	12.49	3210	1.6		
	91	144	10	9.84	2960	1.7		
	120	110	7.5	7.48	2700	1.8		
	22	580	125	125.95	6010	0.83	HKM0903 90B5/B14	90S2
	28	457	100	99.22	5550	0.85		
	37	347	75	75.45	5070	0.86		
	45	287	60	62.43	4760	1.7		
	57	226	50	49.18	4390	1.7		
	24	556	60	59.04	5890	0.9	HKM0902 90B5/B14	90L4
	29	454	50	48.18	5500	1.1		
	35	378	40	40.13	5170	1.3		
	46	285	30	30.24	4710	1.8		
	56	237	25	25.19	4430	2.0		
	71	187	20	19.84	4090	2.0		
	93	142	15	15.09	3730	2.1		
	112	118	12.5	12.49	3510	4.1		
	142	93	10	9.84	3240	4.1		
	187	70	7.5	7.48	2950	4.3		
	30	443	30	30.24	5460	1.1	HKM0902 100B5/B14	100L6
	36	369	25	25.19	5130	1.3		
	45	291	20	19.84	4740	1.3		
	60	221	15	15.09	4330	1.4		
	72	183	12.5	12.49	4060	2.6		
	91	144	10	9.84	3750	2.6		
	120	110	7.5	7.48	3420	2.7		
	18.3	706	150	153.33	7130	1.1	HKM1103 90B5/B14	90S2
	22	596	125	129.48	6740	1.3		
	27	477	100	103.64	6260	1.4		
	37	348	75	75.55	5630	1.5		
	44	296	60	64.18	5330	2.5		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
	55	237	50	51.37	4950	2.7	HKM1103 90B5/B14	90S2
	22	591	60	64.18	6720	1.3	HKM1103 90B5/B14	90L4
	27	473	50	51.37	6240	1.4		
	24	557	60	59.22	6540	1.3	HKM1102 HKM110B	90L4
	29	460	50	48.86	6130	1.6		
	34	388	40	41.26	5800	1.9		
	46	289	30	30.67	5250	2.6		
	54	244	25	25.90	4960	3.1		
	68	195	20	20.73	4610	3.3		
	93	142	15	15.11	4150	3.7		
1.5	15.2	867	60	59.22	7580	0.86	HKM1102 100B5/B14	100L6
	18.4	715	50	48.86	7110	1.0		
	22	604	40	41.26	6720	1.2		
	29	449	30	30.67	6090	1.7		
	35	379	25	25.90	5750	2.0		
	43	304	20	20.73	5340	2.1		
	60	221	16	15.11	4810	2.4		
	70	188	12.5	12.84	4550	4.0		
	88	150	10	10.27	4220	4.3		
	120	110	7.5	7.49	3800	4.7		
	46	418	30	30.24	3720	0.84	HKM0752 100B5/B14	100L1~4
	56	348	25	25.19	3500	0.86		
	71	274	20	19.84	3230	0.88		
	93	208	15	15.09	2950	0.96		
	112	172	12.5	12.49	2770	1.7		
	142	136	10	9.84	2550	1.8		
	187	103	7.5	7.48	2330	1.9		
	72	268	12.5	12.49	3210	1.1	HKM0752 112B5/B14	112M6
	91	211	10	9.84	2960	1.1		
	120	161	7.5	7.48	2700	1.2		
2.2	45	422	60	62.43	4760	1.1	HKM0903 90B5/B14	90L2
	57	332	50	49.18	2390	1.1		
	35	554	40	40.13	5170	0.87	HKM0902 100B5/B14	100L1~4
	46	418	30	30.24	4710	1.2		
	56	348	25	25.19	4430	1.4		
	71	274	20	19.84	4090	1.4		
	93	208	15	15.09	3730	1.4		
	112	172	12.5	12.49	3510	2.8		
	142	136	10	9.84	3240	2.8		
	187	103	7.5	7.48	2950	2.9		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
	36	541	25	25.19	5130	0.9	HKM0902 112B5/B14	112M6
	45	426	20	19.84	4740	0.9		
	60	324	15	15.09	4330	0.93		
	72	268	12.5	12.49	4060	1.8		
	91	211	10	9.84	3750	1.8		
	120	161	7.5	7.48	3420	1.9		
	22	874	125	129.48	6740	0.86	HKM1103 90B5/B14	90L2
	27	700	100	103.64	6260	0.93		
	37	510	75	75.55	5630	1.0		
	44	433	60	64.18	5330	1.7		
	55	347	50	51.37	4950	1.9		
	24	818	60	59.22	6540	0.92	HKM1102 100B5/B14	100L1~4
	29	675	50	48.86	6130	1.1		
	34	570	40	41.26	5800	1.3		
	46	423	30	30.67	5250	1.8		
	54	358	25	25.90	4960	2.1		
	68	286	20	20.73	4610	2.3		
	93	209	15	15.11	4150	2.5		
	109	177	12.5	12.84	3930	4.2		
	136	142	10	10.27	3650	4.6		
	187	103	7.5	7.49	3280	5.0		
2.2	29	659	30	30.67	6090	1.1	HKM1102 112B5/B14	112M6
	35	556	25	25.90	5750	1.3		
	43	445	20	20.73	5340	1.5		
	60	325	15	15.11	4810	1.6		
	70	276	12.5	12.84	4550	2.7		
	88	221	10	10.27	4220	2.9		
	120	161	7.5	7.49	3800	3.2		
	112	235	12.5	12.49	2770	1.3	HKM0752 100B5/B14	100L2~4
	142	185	10	9.84	2550	1.3		
	187	141	7.5	7.48	2330	1.4		
	46	569	30	30.24	4710	0.9	HKM0902 100B5/B14	100L2~4
	56	474	25	25.19	4430	1.0		
	71	374	20	19.84	4090	1.0		
3.0	93	284	15	15.09	3730	1.1		
	112	235	12.5	12.49	3510	2.0		
	142	185	10	9.84	3240	2.1		
	187	141	7.5	7.48	2950	2.1		
	44	591	60	64.18	5330	1.3	HKM1103 100B5/B14	100L2
	55	473	50	51.37	4950	1.4		

HKM..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	M_{2max} [Nm]	i 公称 Nominal	i 实际 Actual	F_{r2} [N]	fs		
3.0	34	777	40	41.26	5800	0.97	HKM1102 100B5/B14	100L2-4
	46	577	30	30.67	5250	1.3		
	54	488	25	25.90	4960	1.5		
	68	390	20	20.73	4610	1.7		
	93	284	15	15.11	4150	1.8		
	109	242	12.5	12.84	3930	3.1		
	136	193	10	10.27	3650	3.4		
	187	141	7.5	7.49	3280	3.7		
	35	759	25	25.90	5750	1.0	HKM1102 132B5	132S6
	43	607	20	20.73	5340	1.1		
	60	443	15	15.11	4810	1.2		
	70	376	12.5	12.84	4550	2.0		
	88	301	10	10.27	4220	2.2		
	120	219	7.5	7.49	3800	2.4		
4.0	112	314	12.5	12.49	2770	0.96	HKM0752 112B5/B14	112M4
	142	247	10	9.84	2550	1.0		
	187	188	7.5	7.48	2330	1.1		
	112	314	12.5	12.49	3510	1.5	HKM0902 112B5/B14	112M4
	142	247	10	9.84	3240	1.5		
	187	188	7.5	7.48	2950	1.6		
	46	770	30	30.67	5250	1.0	HKM1102 112B5/B14	112M4
	54	650	25	25.90	4960	1.2		
	68	520	20	20.73	4610	1.2		
	93	379	15	15.11	4150	1.4		
	109	322	12.5	12.84	3930	2.3		
	136	258	10	10.27	3650	2.5		
	187	188	7.5	7.49	3280	2.8		
5.5	68	716	20	20.73	4610	0.9	HKM1102 132B5	132S4
	93	522	15	15.11	4150	1.0		
	109	443	12.5	12.84	3930	1.7		
	136	354	10	10.27	3650	1.8		
	187	259	7.5	7.49	3280	2.0		

HKM..性能参数 / PERFORMANCE PARAMETER

M_{2max} [Nm]	n_2 [r/min]	i 公称 Nominal	i 实际 Actual	P_{1n} [kW]	F_{r2} [N]	F_{r1} [N]	
130	4.8	300	291.79	0.07	4100	400	NHKM0503
130	5.7	250	244.29	0.09	4100	400	
130	7.0	200	200.44	0.11	4100	400	
130	9.5	150	146.67	0.14	4000	400	
130	11.6	125	120.34	0.18	3770	400	
100	13.9	100	101.04	0.16	3560	400	
80	18.8	75	74.62	0.17	3220	400	
130	22	60	62.36	0.34	3030	400	
100	27	50	52.36	0.31	2860	400	
130	24	60	58.36	0.35	2960	400	NHKM0502
130	29	50	48.86	0.42	2790	400	
130	35	40	40.09	0.52	2610	400	
130	48	30	29.33	0.71	2350	400	
130	58	25	24.07	0.86	2200	400	
100	69	20	20.21	0.79	2080	400	
80	94	15	14.92	0.85	1880	400	
130	112	12.5	12.47	1.7	1770	400	
100	134	10	10.47	1.5	1670	400	
80	181	7.5	7.73	1.6	1510	400	
200	4.6	300	302.50	0.11	4800	400	NHKM0633
200	5.7	250	243.57	0.13	4800	400	
180	7.1	200	196.43	0.15	4800	400	
200	9.2	150	151.56	0.21	4650	400	
180	11.5	125	122.22	0.24	4330	400	
150	13.8	100	101.27	0.24	4070	400	
110	19.1	75	73.33	0.24	3650	400	
180	22	60	63.33	0.46	3480	400	
150	27	50	52.48	0.47	3270	400	
200	23	60	60.50	0.53	3430	530	NHKM0632
200	29	50	48.71	0.65	3190	530	
180	36	40	39.29	0.73	2970	530	
200	46	30	30.31	1.1	2720	530	
180	57	25	24.44	1.2	2530	530	
150	69	20	20.25	1.2	2380	530	
110	95	15	14.67	1.2	2130	530	
180	110	12.5	12.67	2.3	2030	530	
150	133	10	10.50	2.3	1910	530	
110	184	7.5	7.60	2.3	1710	530	

HKM..性能参数 / PERFORMANCE PARAMETER

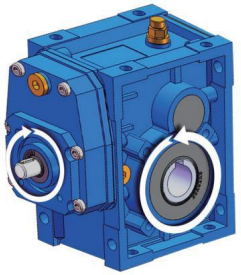
M_{2max} [Nm]	n_2 [r/min]	i 公称 Nominal	i 实际 Actual	P_{1n} [kW]	F_{r2} [N]	F_{r1} [N]	
350	4.7	300	297.21	0.19	6500	560	NHKM0753
350	5.8	250	240.86	0.24	6500	560	
300	7.0	200	200.66	0.24	6500	560	
350	9.3	150	151.20	0.38	6500	560	
300	11.1	125	125.95	0.39	5980	560	
240	14.1	100	99.22	0.39	5520	560	
200	18.6	75	75.45	0.43	5040	560	
300	22	60	62.43	0.78	4730	560	
240	28	50	49.18	0.79	4370	560	
350	24	60	59.44	0.94	4660	860	NHKM0752
350	29	50	48.18	1.2	4340	860	
300	35	40	40.13	1.2	4080	860	
350	46	30	30.24	1.8	3720	860	
300	56	25	25.19	1.9	3500	860	
240	71	20	19.84	1.9	3230	860	
200	93	15	15.09	2.1	2950	860	
300	112	12.5	12.49	3.8	2770	860	
240	142	10	9.84	3.9	2550	860	
200	187	7.5	7.48	4.3	2330	860	
500	4.7	300	295.18	0.27	8300	560	NHKM0903
500	5.8	250	240.89	0.34	8300	560	
480	7.0	200	200.66	0.39	8300	560	
500	9.3	150	151.20	0.54	8050	560	
480	11.1	125	125.95	0.62	7580	560	
380	14.1	100	99.22	0.62	7000	560	
300	18.6	75	75.45	0.65	6390	560	
480	22	60	62.43	1.3	6000	560	
380	28	50	49.18	1.3	5540	560	
500	24	60	59.04	1.3	5890	1260	NHKM0902
500	29	50	48.18	1.7	5500	1260	
480	35	40	40.13	1.9	5170	1260	
500	46	30	30.24	2.6	4710	1260	
480	56	25	25.19	3.0	4430	1260	
380	71	20	19.84	3.1	4090	1260	
300	93	15	15.09	3.2	3730	1260	
480	112	12.5	12.49	6.1	3510	1260	
380	142	10	9.84	6.2	3240	1260	
300	187	7.5	7.48	6.4	2950	1260	

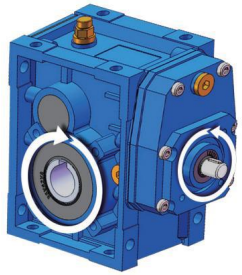
HKM..性能参数 / PERFORMANCE PARAMETER

M_{2max} [Nm]	n_2 [r/min]	i 公称 Nominal	i 实际 Actual	P_{1n} [kW]	F_{r2} [N]	F_{r1} [N]	
750	4.7	300	296.10	0.40	10000	740	NHKM1103
750	5.7	250	244.29	0.50	10000	740	
750	6.8	200	206.29	0.59	9920	740	
750	9.1	150	153.33	0.80	8980	740	
750	10.8	125	129.48	0.94	8490	740	
650	13.5	100	103.64	1.0	7880	740	
520	18.5	75	75.55	1.1	7090	740	
750	22	60	64.18	1.9	6720	740	
650	27	50	51.37	2.1	6240	740	
750	24	60	59.22	2.0	6540	1490	NHKM1102
750	29	50	48.86	2.4	6130	1490	
750	34	40	41.26	2.9	5800	1490	
750	46	30	30.67	3.9	5250	1490	
750	54	25	25.90	4.6	4960	1490	
650	68	20	20.73	5.0	4610	1490	
520	93	15	15.11	5.5	4150	1490	
750	109	12.5	12.84	9.3	3930	1490	
650	136	10	10.27	10.1	3650	1490	
520	187	7.5	7.49	11.1	3280	1490	

安装方位图 / INSTALLATIONPOSITIONSDIAGRAM

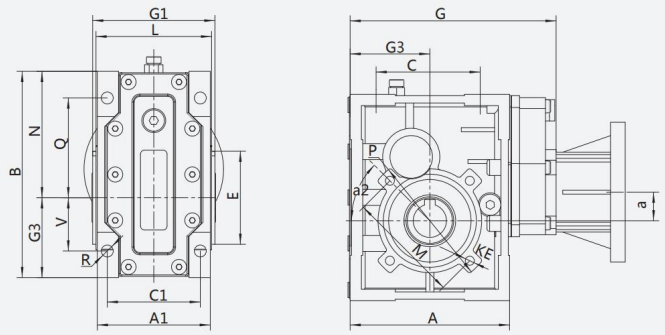
旋转方向/ Direction of rotation



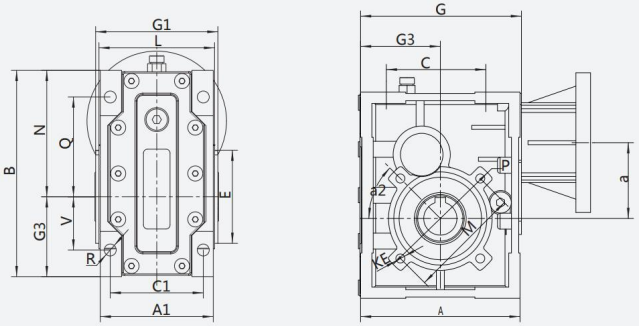


减速机在使用时，电机可正反转输入使用，推荐使用上图所示输入轴旋转方向为准双曲面齿轮最佳啮合方向。
The motor can be run either CW or CCW while using with gearbox,the above chart is recommended.

HKM..IEC 外形尺寸图表 / OUTLINE DIMENSION



■ HKM..3..IEC

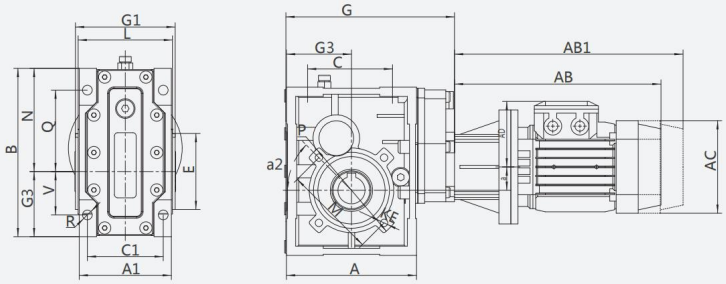


■ HKM..2..IEC

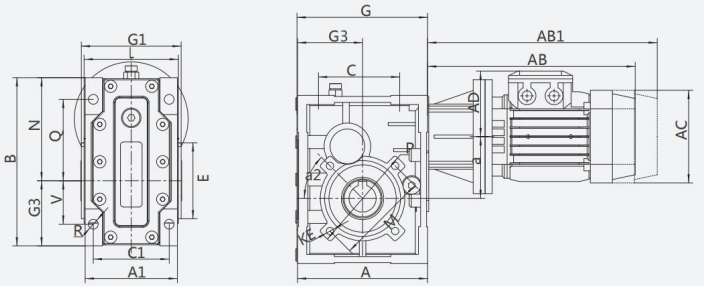
HKM	C	A	B	G	G3	a	C1	KE	a2	L	G1	M	E(h8)	A1	R	P	Q	N	V
0502	80	121	155	121	60	57	70	4-M8*12	45°	87	92	85	70	85	8.5	100	75	95	40
0503	80	121	155	155	60	21.5	70	4-M8*12	45°	87	92	85	70	85	8.5	100	75	95	40
0632	100	144	174	144	72	64.5	85	7-M8*14	45°	106	112	95	80	103	8.5	110	80	102	50
0633	100	144	174	178	72	29	85	7-M8*14	45°	106	112	95	80	103	8.5	110	80	102	50
0752	120	173	205	173	86	74.5	90	7-M8*16	45°	114	120	115	95	112	11.5	140	93	119	60
0753	120	173	205	213	86	30.5	90	7-M8*16	45°	114	120	115	95	112	11.5	140	93	119	60
0902	140	206	238	206	103	88	100	7-M10*18	45°	134	140	130	110	130	13	160	102	135	70
0903	140	206	238	246	103	44	100	7-M10*18	45°	134	140	130	110	130	13	160	102	135	70
1102	170	255	295	255	127.5	108	115	7-M10*18	45°	148	155	165	130	144	14	185	125	167.5	85
1103	170	255	295	305	127.5	52	115	7-M10*18	45°	148	155	165	130	144	14	185	125	167.5	85

HKM..MV 外形尺寸图表 / OUTLINE DIMENSION

■ HKM..3..MV



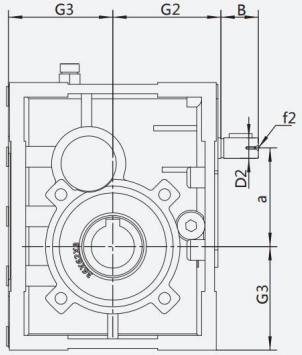
■ HKM..2..MV



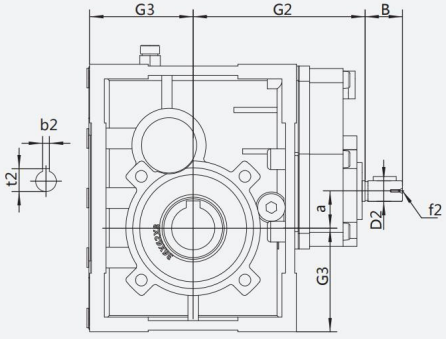
HKM	C	A	B	G	G3	a	C1	KE	a2	L	G1	M	E(n8)	A1	R	P	Q	N	V
0502	80	121	155	121	60	57	70	4-M8*12	45°	87	92	85	70	85	8.5	100	75	95	40
0503	80	121	155	155	60	21.5	70	4-M8*12	45°	87	92	85	70	85	8.5	100	75	95	40
0632	100	144	174	144	72	64.5	85	7-M8*14	45°	106	112	95	80	103	8.5	110	80	102	50
0633	100	144	174	178	72	29	85	7-M8*14	45°	106	112	95	80	103	8.5	110	80	102	50
0752	120	173	205	173	86	74.5	90	7-M8*16	45°	114	120	115	95	112	11.5	140	93	119	60
0753	120	173	205	213	86	30.5	90	7-M8*16	45°	114	120	115	95	112	11.5	140	93	119	60
0902	140	206	238	206	103	88	100	7-M10*18	45°	134	140	130	110	130	13	160	102	135	70
0903	140	206	238	246	103	44	100	7-M10*18	45°	134	140	130	110	130	13	160	102	135	70
1102	170	255	295	255	127.5	108	115	7-M10*18	45°	148	155	165	130	144	14	185	125	167.5	85
1103	170	255	295	305	127.5	52	115	7-M10*18	45°	148	155	165	130	144	14	185	125	167.5	85

MV.	AB	AB1	AC	AD
63	211	266	120	104
71	226	290	130	109
80	261	354	145	110
90S	285	370	160	115
90L	295	380	160	115
100	355	440	185	140
112	373	453	200	158
132	424	504	245	178

NHKM外形尺寸图表 / OUTLINE DIMENSION

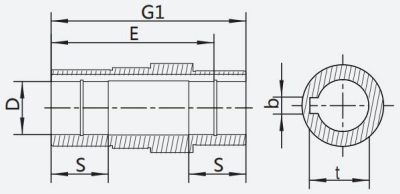


■ NHKM..2



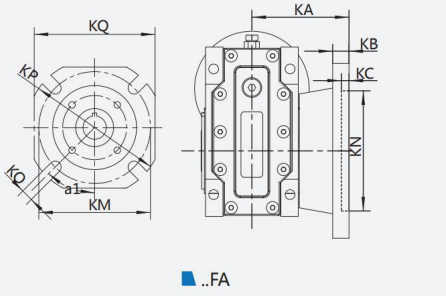
■ NHKM..3

HKM	B	D2(j6)	G2	G3	a	b2	t2	f2
0502	23	11	65	60	57	4	12.5	–
0503	23	11	100	60	21.5	4	12.5	–
0632	30	14	76	72	64.5	5	16	M6
0633	23	11	111	72	29	4	12.5	–
0752	40	16	91	86	74.5	5	18	M6
0753	30	14	132	86	30.5	5	16	M6
0902	40	19	107	103	88	6	21.5	M6
0903	30	14	148	103	44	5	16	M6
1102	50	24	132	127.5	108	8	27	M8
1103	40	19	181	127.5	52	6	21.5	M6

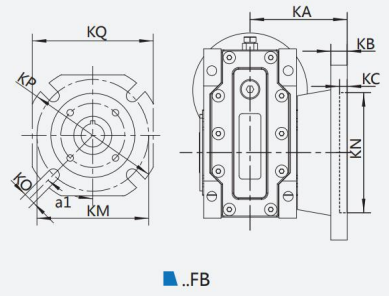


HKM	S	E	G1	D(h8)	b	t
050	30	77	92	20	6	22.8
				24	8	27.3
				25	8	28.3
063	36	97	112	25	8	28.3
				28	8	31.3
075	40	105	120	28	8	31.3
				30	8	33.3
				35	10	38.3
090	45	122	140	35	10	38.3
				38	10	41.3
110	50	131	155	40	12	43.3
				42	12	45.3

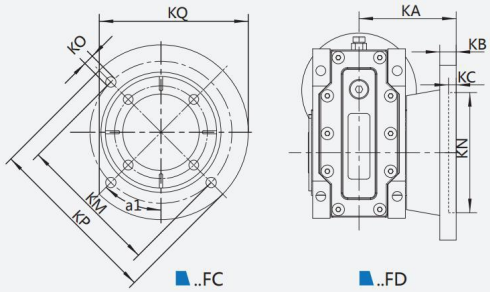
HKM输出法兰尺寸 / HKM OUTPUT FLANGE SIZE



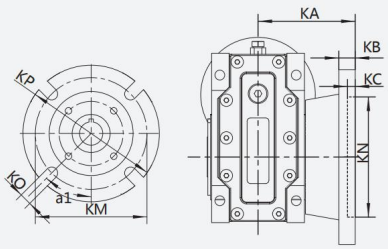
■ ..FA



■ ..FB



■ ..FC ■ ..FD



■ ..FE

HKM	FB								
	a1	KA	KB	KC	KM	KN(H8)	KO	KP	KQ
050	45°	120	9	5	85	70	11(n=4)	125	110
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	–
110	–	–	–	–	–	–	–	–	–

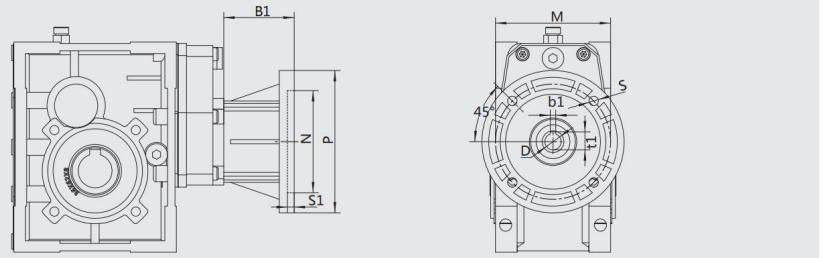
HKM	FA								
	a1	KA	KB	KC	KM	KN(H8)	KO	KP	KQ
050	45°	90	9	5	85	70	11(n=4)	125	110
063	45°	82	10	6	150	115	11(n=4)	180	142
075	45°	111	13	6	165	130	14(n=4)	200	170
090	45°	111	13	6	175	152	14(n=4)	210	200
110	45°	131	15	6	230	170	14(n=4)	280	260

HKM	FC								
	a1	KA	KB	KC	KM	KN(H8)	KO	KP	KQ
050	45°	89	10	5	130	110	9.5(n=4)	160	146
063	45°	98	10	5	165	130	11(n=4)	200	180
090	45°	110	17	6	165	130	11(n=4)	200	–

HKM	FD								
	a1	KA	KB	KC	KM	KN(H8)	KO	KP	KQ
050	45°	72	14.5	5	115	95	11(n=4)	140	130
063	45°	107	10	5	165	130	11(n=4)	200	180
090	45°	151	13	6	175	152	14(n=4)	210	–

HKM	FE								
	a1	KA	KB	KC	KM	KN(H8)	KO	KP	KQ
050	–	–	–	–	–	–	–	–	–
063	45°	80.5	16.5	5	130	110	(n=4)	160	–
090	–	–	–	–	–	–	–	–	–

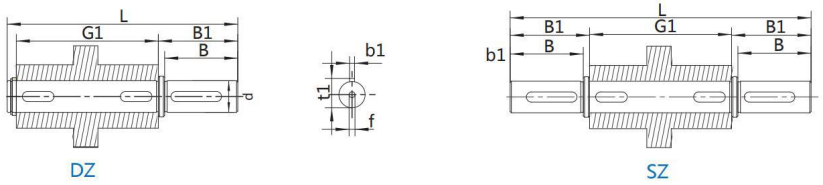
HKM输入法兰尺寸 / INPUT FLANGE DIMENSION



HKM	PAM-IEC	N B5	N B14	M B5	M B14	P B5	P B14	S B5	S B14	b1	r1	s1	B1	i(速比、ratio) 7.5	10	12.5	15	20	25	30	40	50	60	50	60	75	100	125	150	200	250	300
														D																		
														B										C							
050	63B5	95	–	115	–	140	–	9	–	4	12.8	5	45										11									
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	52								14								–	–	–	–
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	72							19				–	–	–	–	–	–	–	–	–
	90B4/B14	130	95	165	115	200	140	11	9	8	27.3	5	72					24			–	–	–	–	–	–	–	–	–	–	–	–
063	63B5	95	–	115	–	140	–	9	–	4	12.8	5	45	–	–	–	–	–	–						11							
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	52	–	–	–						14							–	–	–	–
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	72							19						–	–	–	–	–	–	–
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	72					24					–	–	–	–	–	–	–	–	–	–
075	63B5	95	–	115	–	140	–	9	–	4	12.8	5	52	–	–	–	–	–	–	–	–	–	–	–				11				
	71B5	110	–	130	–	160	–	9	7	5	16.3	5	59	–	–	–	–	–	–	–					14							
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	79	–	–	–						19							–	–	–	–
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	79							24					–	–	–	–	–	–	–	–
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	89					28				–	–	–	–	–	–	–	–	–	–	–
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	89				28				–	–	–	–	–	–	–	–	–	–	–	–
090	63B5	95	–	115	–	140	–	9	–	4	12.8	5	52	–	–	–	–	–	–	–	–	–	–	–				11				
	71B5	110	–	130	–	160	–	9	7	5	16.3	5	59	–	–	–	–	–	–	–					14							
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	79	–	–	–						19							–	–	–	–
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	79							24					–	–	–	–	–	–	–	–
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	89					28				–	–	–	–	–	–	–	–	–	–	–
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	89				28				–	–	–	–	–	–	–	–	–	–	–	–
110	71B5	110	–	130	–	160	–	9	7	5	16.3	6	64	–	–	–	–	–	–	–	–	–	–	–	–				14			
	80B5	130	–	165	–	200	–	11	7	6	21.8	6	84	–	–	–	–	–	–	–					19							
	90B5	130	–	165	–	200	–	11	9	8	27.3	6	84	–	–	–						24							–	–	–	–
	10B5/B14	180	110	215	130	250	160	13	9	8	31.3	6	94							28					–	–	–	–	–	–	–	–
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	6	94							28					–	–	–	–	–	–	–	–
	132B5	230	–	265	–	300	–	13	–	10	41.3	6	114						38				–	–	–	–	–	–	–	–	–	–

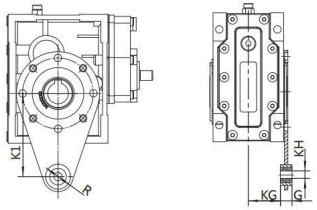
附件尺寸表 / ACCESSORIES OUTLINE DIMENSION SHEET

输出轴 / Output Shafts



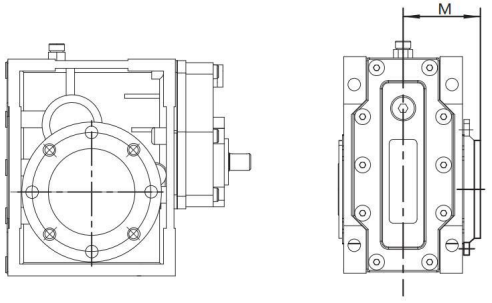
KRV	d(h6)	B	B1	G1	L	L1	f	b1	t1
050	25	50	53.5	92	153	199	M10*20	8	28
063	25	50	53.5	112	173	219	M10*20	8	28
075	28	60	63.5	120	192	247	M10*20	8	31
090	35	80	84.5	140	234	309	M12*30	10	38
110	42	80	84.5	155	249	324	M16*30	12	45

扭力臂 / Torque Arm



HKM	K1	G	KG	R	KH
050	100	14	38.5	18	10
063	150	14	49	18	10
075	200	25	47.5	30	20
090	200	25	57.5	30	20
110	250	30	62	35	25

防尘盖 / Cover



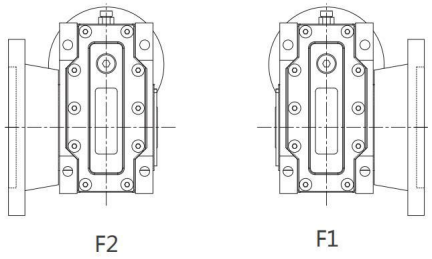
HKM	M
050	58
063	69
075	74
090	86
110	94

安装方位图 / INSTALLATION POSITIONS DIAGRAM

输出法兰位置 / Position diagram for output flange

如果没有特殊要求一般按出厂标准位置如F1方式和B3位置提供。

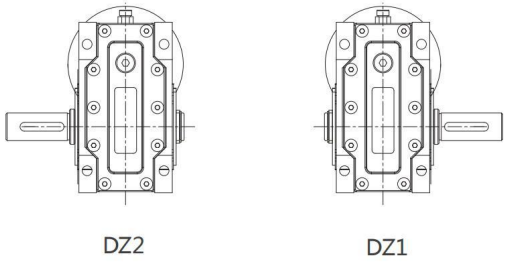
Unless specified otherwise,the gear units is supplied with the flange in pos, F1 referred to position B3



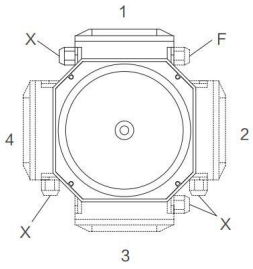
单向输出轴位置 / Position diagram for single output-shaft

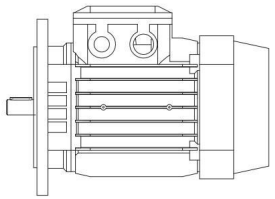
如果没有特殊要求一般按出厂标准位置如DZ1方式和B3位置提供。

Unless specified otherwise,the gear units is supplied with the flange in pos, DZ1 referred to position B3



电机接线盒方位 / Position of motor terminal box



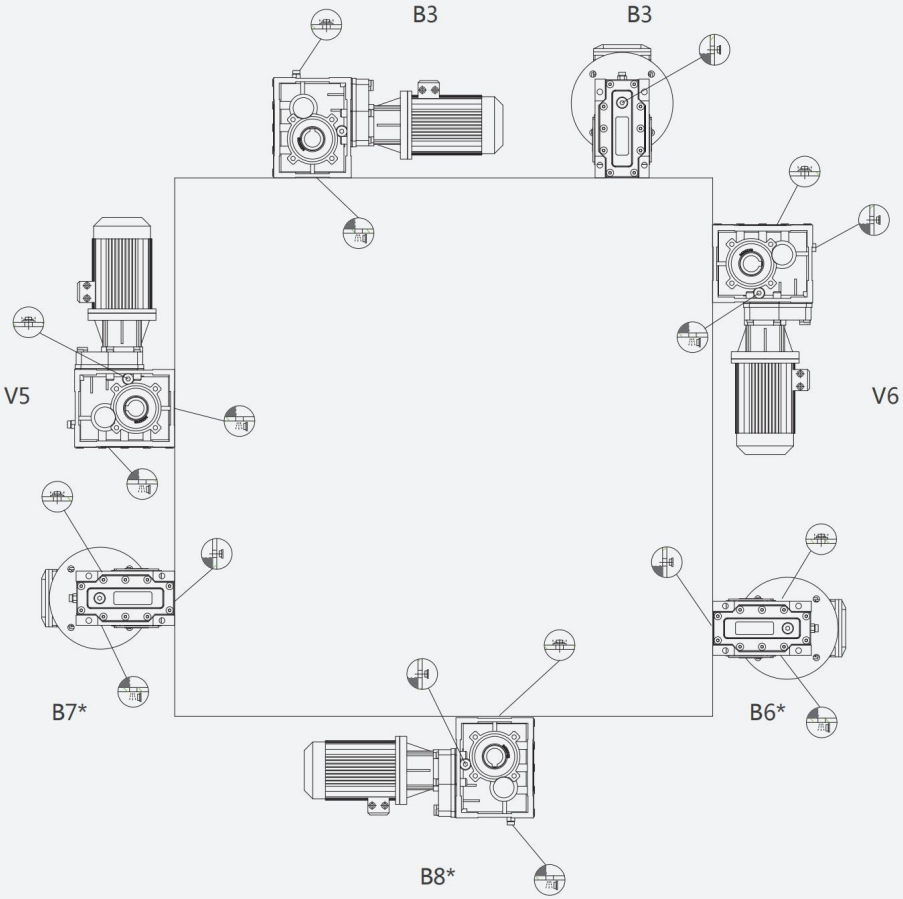


X:标准接线位置

normal position

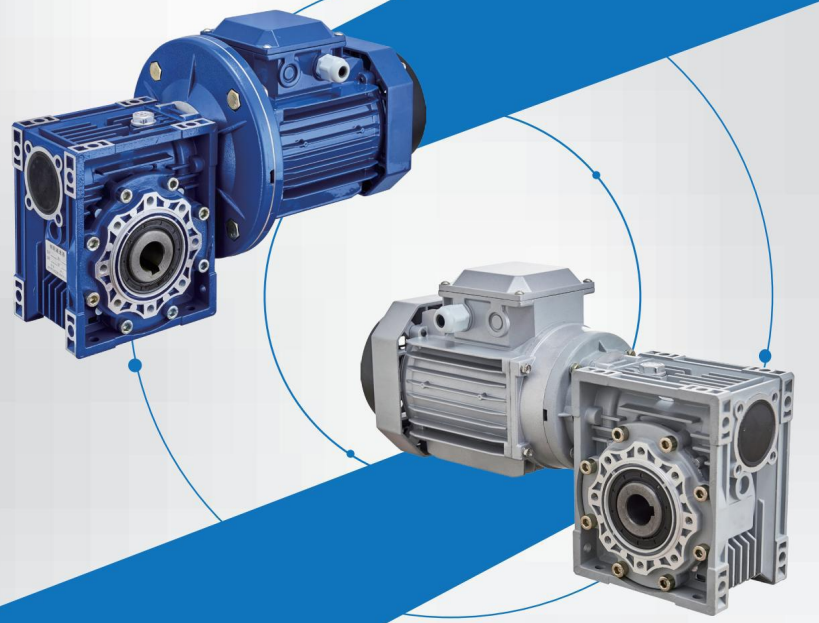
符号/Symbol	含义/Meaning
	排气阀 Breather valve
	油位塞 Oil level plug
	放油塞 Oil drainning plug

安装方位图 / INSTALLATION POSITIONS DIAGRAM



表示在此安装方法，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。

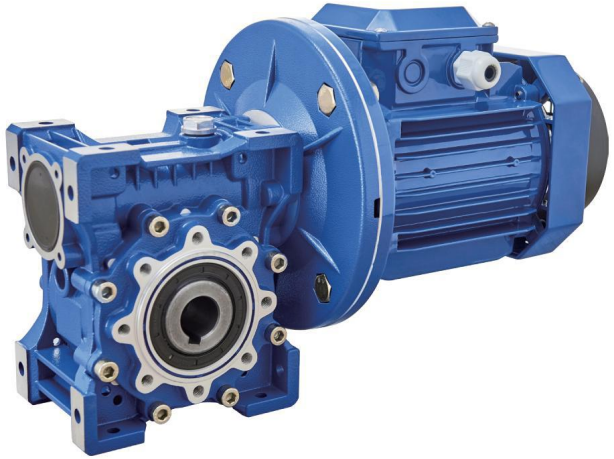
It means the lubricant can’t be added according to the oil level line plug, but also higher the plug to fill quantity as shown in the table.



NMRV WORM GEAR REDUCER

NMRV蜗轮蜗杆减速机

产品形式 / TYPE





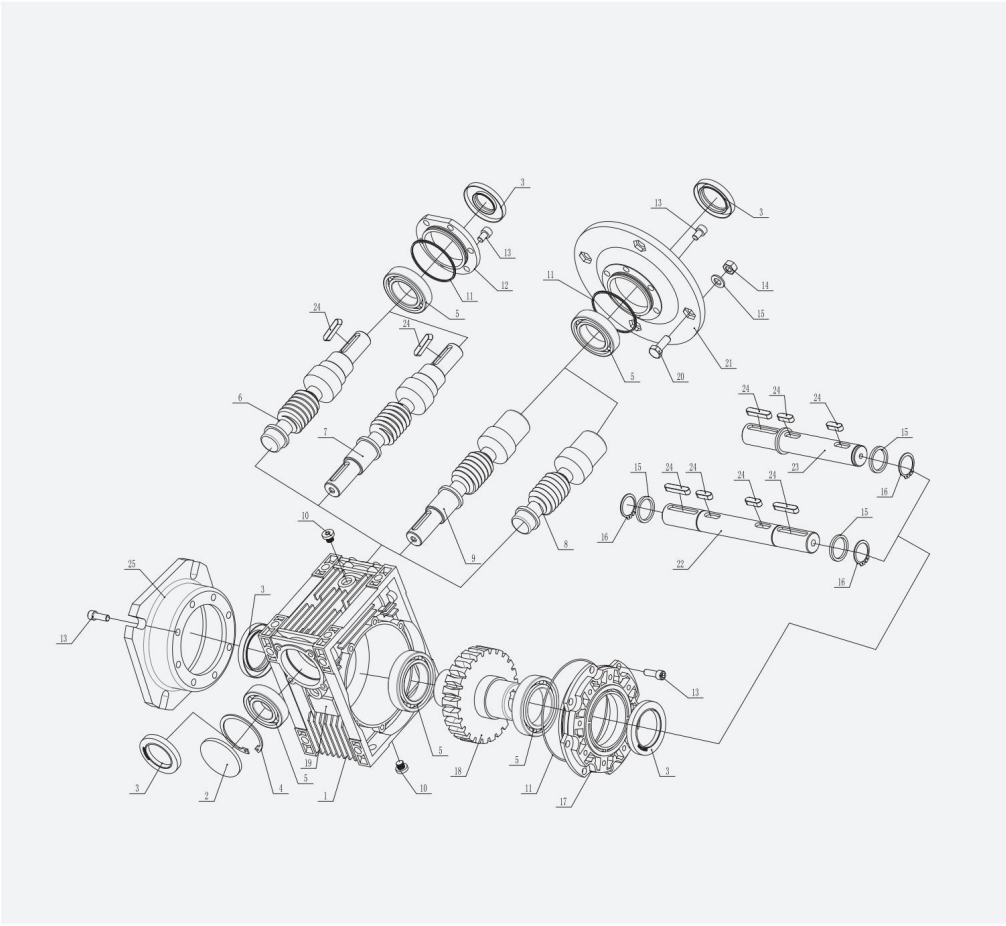








结构分解图 / STRUCTURE DIAGRAM



序号	名称	序号	名称	序号	名称	序号	名称
1	箱体/Case	7	双轴输入蜗杆/Double input worm	13	内六角螺钉/Inner hex screw	19	铭牌/Nameplate
2	油盖/Closing cap	8	孔输入蜗杆/Input hole worm	14	外六角螺母/Six hexagon nut	20	外六角螺栓/Six hexagon bolt
3	油封/Oil seal	9	孔输入轴输入蜗杆/Input shaft and hole worm	15	垫圈/Washer	21	输入法兰/Intput flange
4	孔用挡圈/Hole-circlip	10	油塞/Oil plug	16	轴用挡圈/Shaft-circlip	22	双向输出轴/Double output shaft
5	轴承/Bearing	11	O型橡胶密封圈/O-ring	17	输出端盖/Bearing support cover	23	单向输出轴/single output shaft
6	轴入蜗杆/Input worm	12	轴承座/Bearing block	18	蜗轮/Worm gear	24	键/Key
25	输出法兰/Output flange						

产品概述 / SUMMARIZE

结构特点 / Structure Featurea

1.优质铝合金铸造箱体，适应全方位的万能安装配置；
2.充分的冷却筋条，使机体具有优良的热传导性能；
3.从025-150共10种机座规格；传递功率范围从60W-15kW；
4.速比范围大，每单个机座具有从5:1到100:1得12种减速比；
5.精密磨削加工得硬齿面传动蜗杆，效率高、输出扭矩大；
6.低噪声平稳运行，能适合在恶劣环境中长期连续工作；
7.重量轻，机械强度高；
8.模块化组合DRV将NMRV 减速机得传动比拓展至：i=5—5000

1.high quality die casting aluminum alloy housing,suitable for universal mounting.
2.Heat sink design for cooling provides great surface area and higher thermal conductivity than the casting iron housings.
3.025 to150,transrnit power scope from 60W to 15kW.
4.Larger speed ratio range.each single frame size has 12 ratios from 5:1 to 100:1
5.Hardened worm with fine grinding has the features of higher efficiency and big output torque.
6.Low noise and stably running,can adapt long term work condition in terrible environments
7.Light weight,high mechanical strength
8.Modularization combination DRV extend the ration of NMRV reducers from i=5:1 to 5000:1

主要材料 / Main Materials

1.外壳：铝合金（机座：025-090），铸铁（机座：110-150）；
2.蜗杆：20Cr，渗碳淬火，齿面硬度58-62HRC，精磨后保持渗碳层厚度0.3-0.5mm；
3.蜗轮：耐磨锡青铜。

1.Housing:die-cast aluminum alloy(frame size 025 to 090);cast iron(frame size:110 to 150);
2.Worm:20Cr,carbonize&quencher heat treatment make the hardness of gear’s surface up to 58-62HRC,retain carburized layer’s thickness between 0.3 and 0.5mm after accurate grinding.
3.Worm wheel:wearable nickel bronze alloy.

表面涂装 / Surface Painting

铝合金外壳
1.先抛丸处理，再经特种防腐处理，保持银白金属感，并耐汽油、二甲苯等有机溶剂得腐蚀；
2.磷化处理后，再喷RAL5010蓝色或RAL7035浅灰色涂料。
铸铁外壳：先涂红色防锈漆，后涂RAL5010蓝色或RAL7035浅灰色涂料。

Aluminum alloy housing:
1.Shot blasting and special antiseptic treatment on the aluminum alloy surface.
2.After phosphating,paint with RAL5010 blue or RLA7035 grey paint.

Cast iron housing:First paint with red antirust paint,then paint with RAL5010 blue or RAL7035 grey paint.

型号说明 / MODEL ILLUMINATE

NMRV	063 / 40	E	F	DZ	TA	B3	71B5
1	2 3	4	5	6	7	8	9

序号	说明	
1	减速机系列代号:1.MNRV为孔输入 2.NRV为轴输入3.DRV为双蜗轮减速机	Gear unit code:1.NMRV means hole input ,2.NRV means shaft input 3.DRV means double gear units
2	减速机中心距（025~150）	Gear unit’s center distance
3	减速机速比（7.5~100）	Ratio
4	E为蜗杆同向尾出轴（无代号为不带尾出轴）	Double extension worm shaft (No mark means single extension worm shoft)
5	输出法兰	Output flange
6	DZ为单向输出轴,SZ为双向输出轴	DZ–single output shaft,SZ–Double output shaft
7	扭力臂	Torque arm
8	安装方位代号	The code of installation position
9	电机机座号	Motor frome

扭矩 M / Torque (N · M)

$M_2=9550 \cdot P_1 \cdot \eta / n_2 (Nm)$

$M_{2n} \geqslant M_2 \cdot fs (Nm)$

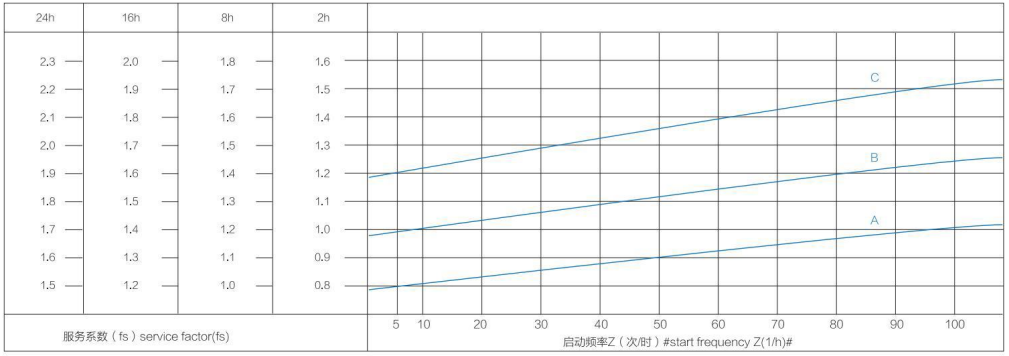
M_2 输出扭矩　M_{2n} 额定输出扭矩
P_1 输入功率　η 传动效率
fs 服务系数

M_2 Output torque　M_{2n} Rated output torque
P_1 Input power　η Transmission efficiency
fs Service factor

服务系数 fs / Service factor fs

减速机上的从动机构的受驱动效果是用服务系数fs这个系数来衡量的。该服务系数根据每天的运转时间和启动频率而定的。三种负载分类取决于惯性加速系数，按这图标选取的服务系数必须小于或者等于性能参数表中提供的服务系数。

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor fs.The service factor is determined according to the daily operating time and the starting frequency Z. Three load classifications are considered depending on the mass acceleration factor.You can read off the service factor applicable to your application in following figure.The service factor selected using this diagram must be less than or equal to the service factor as given in the performance table.



启动频率Z：周期包括所有启动，制动的次数及变速电机高低速变化时的次数她。
Starting frequency Z:The cycles includa all starting and braking times as well as change overs from low to high speed.

负载类型 / Load clasificassifications

负载性质
Type of load

A.均匀冲击负载，允许惯性加速系数Fa≤0.3
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,permitted mass acceleration factor Fa≤0.3
B.Moderate shock load,permitted mass acceleration factor Fa≤3
C.Heavy shock load,permitted mass acceleration factor Fa≤10

负载类型
Load Classifications：

轻负载的螺杆输送，风扇，装备先，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，纹螺纹机器，中型搅拌器，重型输送带，绞盘，滑动闸门，挂料机,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，震荡装置，破碎机。

Screw feeders for light materials, fans,assembly lines,conveyor belts for light materials,small mixers,lifts,cleaning machines,medium mixers,conveyor belts for heavy materials,winches,sliding doors,fertilizer scrapers,packing machines,concrete mixers.crane mechanisms,milling cutters,folding machines,gear pumps.
Mixers for heavy materials,shears,presses centrifuges,rotating supports,winches and lifts for heavy materials,grinding lathes,stone mills,bucket elevators,drilling machines,hammer mills,campresses,folding machines,tumtables,tumbling barrels,vibrators,shredders.

惯性加速系数 / Mass acceleration factor

惯性加速系数计算如下：

Fa=Jc/Jm
Fa惯性加速系数
Jc所有外部传动惯量（kgm^2）
Jm驱动电机的传动惯量（kgm^2）
如果惯性加速系数Fa＞10，请与我们技术部联系。

受环境温度影响，服务系数fs仍须按以下调整：
1.环境温度30~40℃：fs x（1.1~1.2）
2.环境温度40~50℃：fs x（1.3~1.4）
3.环境温度50~60℃：fs x（1.5~1.6）
4.环境温度＞60℃，请与我们技术服务人员联系。

为了保持减速机的使用寿命，从产品样本中所选择的服务系数fs应等于或略高于计算出的服务系数fs

The mass acceleration factor is calculated as follows:

Fa=Jc/Jm
Fa Mass acceleration factor
Jc All external mass moments of inertia(kgm^2)
Jm Mass morment of inertia on the motor end (kgm^2)
If mass acceleration factors fa＞10，please call our Technical Service.

Service factor fs should be adjusted as followings:
1.ambient temperature is 30~40℃：fs x（1.1~1.2）
2.ambient temperature is 40~50℃：fs x（1.3~1.4）
3.ambient temperature is 50~60℃：fs x（1.5~1.6）
ambient temperature is ＞60℃，please call our Technical Service.

To keep the service–life of gear units,use factor fs selected from the catalogue must be equal or slightly higher than the calculated use factor fs.

效率与自锁特性/ Efficiency & irreversibility character

效率是减速机一个重要参数，效率η的值取决于下列参数：
1.蜗轮蜗杆的螺旋角；
2.输入转速；3.蜗轮蜗杆的磨合时间；
4.油品、油封和轴承的性能。

请注意：这些参数是指定减速机磨合后性能稳定的计算值。另外，样本中规定的扭矩M2n 也是减速机磨合性能稳定的计算值。上述的实际值可能会有上下偏差。

Efficiency is an important parameter of reducer, efficiency value depends on the following parameters:
1 helix angle of worm and worm wheel and worm;
2 input speed; 3 worm wheel running in time;
4 oil, oil seal and bearing performance.

Please note: these parameters are specified for the performance stability of the speed reducer running after the calculation. In addition, the sample of the torque M2n is also the speed reducer running performance stability of the calculated value. The actual value of the above may be up and down.

径向载荷 Fr / Radial loads Fr

在决定影响径向载荷时，安装在轴端上的传动件类型必须考虑在内，不同类型的传动对应不同传动附加系数fz，列表如下:

When determining the resulting resulting radial loads,the type of transmission elements,mounted on the shaft end must be considered,Varous transmission elements are corresponding with following transmission element factors fz

传动件 Transmission element	传动附加系数fz Transmission element factor fz	注释 Comments
齿轮 Grears	1.00	≥17齿 teeth
链轮 Chain sprockets	1.15	<17齿 teeth
	1.00	≥20齿 teeth
	1.25	<13齿 teeth
	1.40	有预紧力作用 Influence of the tensile force
V带轮 Narrow V–belt pulleys	1.75	有预紧力作用 Influence of the tensile force
平带轮 Flat belt pulleys	2.50	有预紧力作用 Influence of the tensile force
齿带轮 Toothed belt pulleys	2.50	有预紧力作用 Influence of the tensile force

作用在轴上的径向载荷按如下公式:

The overhung loads exerted on the motor or gear shaft is then calculated as follows

$$Fr=\frac{M\cdot 2000\cdot fz}{d_0}\ (N)$$

Fr 作用在轴上的载荷（N） Resulting axial load (N)

M 作用在轴上的扭矩（N/m） Torque on the shaft (N/m)

d_0 安装在轴上传动件的平均直径（mm） Mean diameter of the mounted transmis sion element in (mm)shaft

fz 传动附加系数 Transmission element factor

当径向符合不作用在轴重点时，按以下公式计算有效负荷:

The all owed radial load force on the shaft is calculated with the following formual:

$$F\ x\ L=\frac{F_{r2}\cdot a}{(b+x)}\ (N)$$

F_{r2} 依据下面表格给出中底脚安装式齿轮减速机的许可径向载荷（X=L/2）(N)

a,b 减速机径向换算常量（mm）

x 轴肩到实际作用点的距离（mm）

a,b,F_{r2} 的数值在下面表格给出:

F_{r2} Permitted overhung load(X= L/2)for foot–mounted gear units according to the selection tables in(N)

a,b Gear unit constant for overhung load conversion (mm)

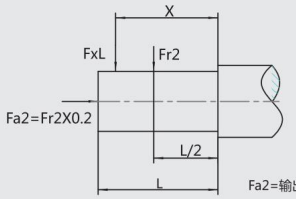
x Distance form the shaft shoulder to the force application point in (mm)

The values of a,b,F_{r2} are given in the following tables:

当径向和轴向负载同时存在时，最大的轴向负载值只是径向负载值的1/5,图表中所表示的是输出轴的最大承重量。

The maxium admissible axial loads are 1/5 of the value of the given radial load when they are applied in combination with the axial radial load,The tables relating to the output shafts give the maximum admissible value.

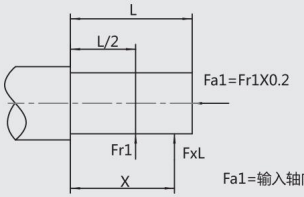
输出轴径向载荷 / Output shafts radial loads



Fa2=输出轴向载荷 Output axial loads

NMRV	025	030	040	050	063	075	090	110	130	150
A	50	65	84	101	120	131	162	176	188	215
B	38	50	64	75	95	101	122	136	148	174
$F_{r2\ max}$	1350	1830	3490	4840	6270	7380	8180	12000	13500	18000

输入轴径向载荷 / Input shafts radial loads



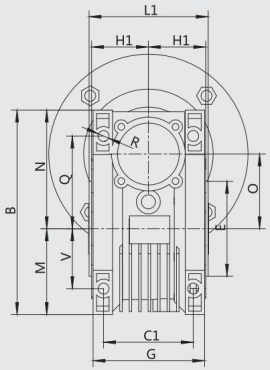
Fa1=输入轴向载荷 Input axial loads

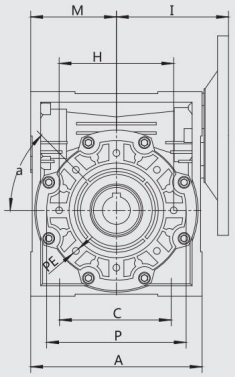
NMRV	030	040	050	063	075	090	110	130	150
A	86	106	129	159	192	227	266	314	350
B	76	94.5	114	139	167	202	326	274	310
$F_{r1\ max}$	210	350	490	700	980	1270	1700	2100	2800

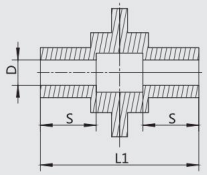
选型表注释 / Selection tablescomments

P_{1n}	输入电机额定功率(kW)	Rated Power of driving motor(kw)	i	减速机速比	Ratio
n_2	输出转速（r/min）	Output speed(r/min)	fs	服务系数	Serivice factor
M_{2n}	额定输出扭矩（Nm）	Rated output torque(N · m)		RV减速机型型号	RV gear unittype
M_{2max}	最大允许输出扭矩（Nm）	Max.output turque(Nm)		DRV减速机型号	DRV gear unittype
				电机型号	Motor type

NMRV外形尺寸图表 / OUTLINE DIMENSION SHEET





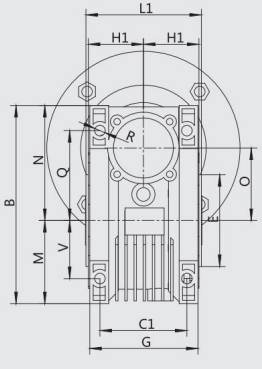


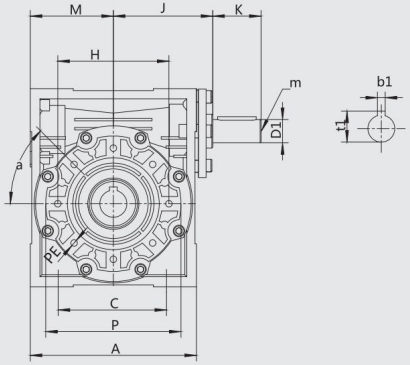


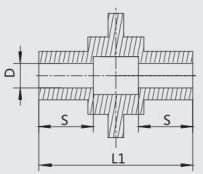
NMRV	A	B	C	C1	D(H7)	E(h7)	G	H	H1	I	L1	M	N	O
025	70	83	45	34	11	45	42	55	22.5	45	50	35	48	25
030	80	97	54	44	14	55	56	65	29	55	63	40	57	30
040	100	121.5	70	60	18(19)	60	71	75	36.5	70	78	50	71.5	40
050	120	144	80	70	25(24)	70	85	85	43.5	80	92	60	84	50
063	144	174	100	85	25(28)	80	103	95	53	95	112	72	102	63
075	172	205	120	90	28(35)	95	112	115	57	112.5	120	86	119	75
090	206	238	140	100	35(38)	110	130	130	67	129.5	140	103	135	90
110	255	295	170	115	42	130	144	165	74	160	155	127.5	167.5	110
130	293	335	200	120	45	180	155	215	81	179	170	146.5	187.5	130
150	340	400	240	145	50	180	185	215	96	210	200	170	230	150

NMRV	P	Q	R	S	V	PE	b	t	α
025	65	35.5	6	18	22.5	Φ6.5(n=3)	4	12.5	–
030	75	44	6.5	21	27	M6×11（n=4）	5	16.3	0°
040	87	55	6.5	26	35	M6×11（n=4）	6	20.8(21.8)	45°
050	100	64	8.5	30	40	M8×10（n=4）	8	28.3(27.3)	45°
063	110	80	8.5	36	50	M8×14（n=8）	8	28.3(31.3)	45°
075	140	93	11	40	60	M8×14（n=8）	8(10)	31.3(38.3)	45°
090	160	102	13	45	70	M10×18（n=8）	10	38.3(41.3)	45°
110	200	125	14	50	85	M10×18（n=8）	12	45.3	45°
130	250	140	16	60	100	M12×21（n=8）	14	48.8	45°
150	250	180	18	72.5	120	M12×21（n=8）	14	53.8	45°

NRV外形尺寸图表 / NRV OUTLINE DIMENSION





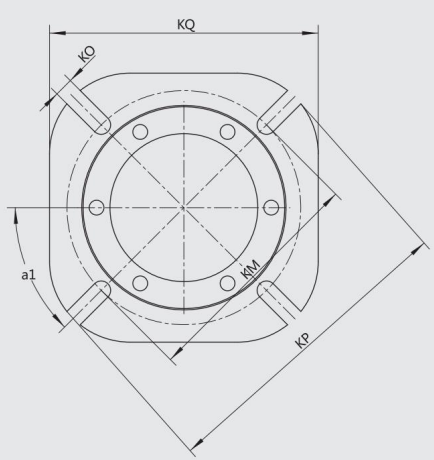


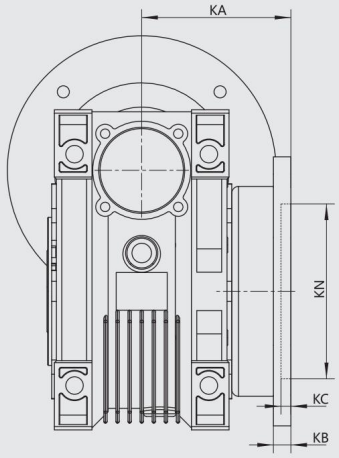


NMRV	A	B3	C	C1	D(H7)	D1(j7)	IE(h7)	G	H	H1	J	K	L1	M	N	O
025	70	83	45	34	11	9	45	42	55	22.5	37	20	50	35	48	25
030	80	97	54	44	14	9	55	56	65	29	51	20	63	40	57	30
040	100	121.5	70	60	18(19)	11	60	71	75	36.5	60	23	78	50	71.5	40
050	120	144	80	70	25(24)	14	70	85	85	43.5	74	30	92	60	84	50
063	144	174	100	85	25(28)	19	80	103	95	53	90	40	112	72	102	63
075	172	205	120	90	28(35)	24	95	112	115	57	105	50	120	86	119	75
090	206	238	140	100	35(38)	24	110	130	130	67	125	50	140	103	135	90
110	255	295	170	115	42	28	130	144	165	74	142	60	155	127.5	167.5	110
130	293	335	200	120	45	30	180	155	215	81	162	80	170	146.5	187.5	130
150	340	400	240	145	50	35	180	185	215	96	195	80	200	170	230	150

NMRV	P	Q	R	S	V	PE	b	b1	t	t1	m	α
025	65	35.5	6	18	22.5	Φ6.5(n=3)	4	3	12.8	10.2	–	–
030	75	44	6.5	21	27	M6×11（n=4）	5	3	16.3	10.2	–	0°
040	87	55	6.5	26	35	M6×11（n=4）	6	4	20.8(21.8)	12.5	–	45°
050	100	64	8.5	30	40	M8×10（n=4）	8	5	28.3(27.3)	16.0	M6	45°
063	110	80	8.5	36	50	M8×14（n=8）	8	6	28.3(31.3)	21.5	M6	45°
075	140	93	11	40	60	M8×14（n=8）	8(10)	8	31.3(38.3)	27.0	M8	45°
090	160	102	13	45	70	M10×18（n=8）	10	8	38.3(41.3)	27.0	M8	45°
110	200	125	14	50	85	M10×18（n=8）	12	8	45.3	31.0	M10	45°
130	250	140	16	60	100	M12×21（n=8）	14	8	48.8	33.0	M10	45°
150	250	180	18	72.5	120	M12×21（n=8）	14	10	53.8	38	M12	45°

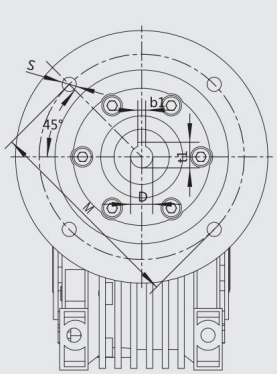
NMRV输出法兰尺寸图 / NMRV OUTPUT FLANGE DIMENSION SHEET

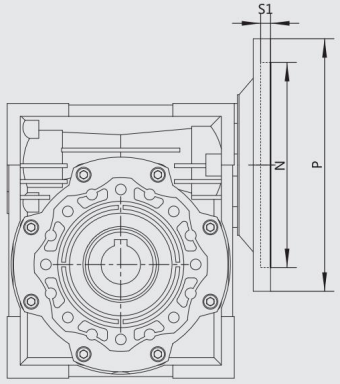




NMRV	F							
	a1	KA	KB	KC	KN(h8)	KO	KP	KQ
025	45°	45	6	2.5	40	6.5(n=4)	75	70
030	45°	54.5	6	4	50	6.5(n=4)	80	70
040	45°	67(97)	7	4	60	9(n=4)	110	95
050	45°	90.5(120)	9	5	70	11(n=4)	125	110
063	45°	82.5(112.5)	10	6	115	11(n=4)	180	142
075	45°	111	13	6	130	14(n=4)	200	170
090	45°	111	13	6	152	14(n=4)	210	200
110	45°	131	15	6	170	14(n=4)	280	260
130	22.5°	141.5	15	6	180	16(n=4)	320	290
150	22.5°	157.5	15	6	180	16(n=4)	320	290

NMRV.IEC输入法兰尺寸图 / NMRV.IEC INPUT FLANGE DIMENSION SHEET

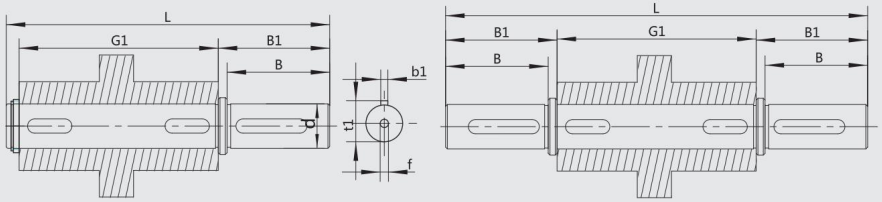




NMRV	PAM-IEC	N		M		P		S		b1	t1	s1	i(速比/ratio)										
		B5	B14	B5	B14	B5	B14	B5	B14				5	7.5	10	15	20	25	30	40	50	60	80	100
													D											
025	56B14	–	50	–	65	–	80	–	6	3	10.4	4	9	9	9	9	9	9	9	9	9	9	–	–
030	56B5/B14	80	50	100	65	120	80	6.5	5.5	3	10.4	4	9	9	9	9	9	9	9	9	9	9	9	–
	63B5/B14	95	60	115	75	140	90	9	5.5	4	12.8	4	11	11	11	11	11	11	11	11	11	–	–	–
040	56B5/B14	80	50	100	65	120	80	6.5	5.5	3	10.4	4	–	–	–	–	–	–	–	–	9	9	9	9
	63B5/B14	95	60	115	75	140	90	9	5.5	4	12.8	4	11	11	11	11	11	11	11	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	14	14	14	14	14	14	14	14	–	–	–	–
050	63B5/B14	95	60	115	75	140	90	9	5.5	4	12.8	5	–	–	–	–	–	–	–	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	14	14	14	14	14	14	14	14	14	14	14	–
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	19	19	19	19	19	19	19	19	–	–	–	–
063	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	–	–	–	–	–	–	–	14	14	14	14	14
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	–	19	19	19	19	19	19	19	19	19	19	19
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	–	24	24	24	24	24	24	–	–	–	–	–
075	71B5	110	–	130	–	160	–	9	7	5	16.3	5	–	–	–	–	–	–	–	–	14	14	14	14
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	–	–	–	–	–	–	19	19	19	19	19	19
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	–	24	24	24	24	14	24	24	–	–	–	–
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	–	28	28	28	–	–	–	–	–	–	–	–
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	–	28	–	–	–	–	–	–	–	–	–	–
090	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	–	–	–	–	–	–	–	–	19	19	19	19
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	–	–	–	–	–	24	24	24	24	24	–	–
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5	–	28	28	28	28	28	28	–	–	–	–	–
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	–	28	28	28	28	–	–	–	–	–	–	–
110	80B5	130	–	165	–	200	–	11	7	6	21.8	5.5	–	–	–	–	–	–	–	–	–	–	19	19
	90B5	130	–	165	–	200	–	11	9	8	27.3	6	–	–	–	–	–	–	24	24	24	24	24	24
	100B5	180	–	215	–	250	–	13	9	8	27.3	6	–	28	28	28	28	28	28	28	28	28	–	–
	112B5	180	–	215	–	250	–	13	9	8	31.3	6	–	28	28	28	28	28	28	–	–	–	–	–
	132B5	230	–	265	–	300	–	13	–	10	41.3	6	–	38	38	38	38	–	–	–	–	–	–	–
130	90B5	130	–	165	–	200	–	11	9	8	27.3	6	–	–	–	–	–	–	–	–	–	–	24	24
	100B5	180	–	215	–	250	–	13	9	8	31.3	6	–	–	–	–	–	–	–	28	28	28	28	28
	112B5	180	–	215	–	250	–	13	9	8	31.3	6	–	28	28	28	28	28	28	28	28	28	–	–
	132B5	230	–	265	–	300	–	13	–	10	41.3	6	–	38	38	38	38	38	38	38	–	–	–	–
150	100/112B5	180	–	215	–	250	–	13	9	8	31.3	6	–	–	–	–	–	–	–	–	28	28	28	28
	132B5	230	–	265	–	300	–	13	–	10	41.3	6	–	–	–	–	38	38	38	38	38	38	–	–
	160B5	250	–	300	–	350	–	19	–	12	45.3	6	–	42	42	42	42	42	–	–	–	–	–	–

附件尺寸图表 / ACCESSORIES OUTLINE DIMENSION SHEET

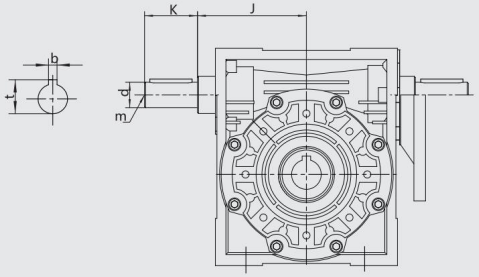
输出轴 / Output Shafts



DZ　　SZ

NMRV	d(h6)	B	B1	G1	L	L1	f	b1	t1
025	11	23	25.5	50	81	102	–	4	12.5
030	14	30	32.5	63	102	128	M6*17	5	16
040	18	40	43	78	128	164	M6*17	6	20.5
050	25	50	53.5	92	153	199	M10*20	8	28
063	25	50	53.5	112	173	219	M10*20	8	28
075	28	60	63.5	120	192	247	M10*20	8	31
090	35	80	84.5	140	234	309	M12*30	10	38
110	42	80	84.5	155	249	324	M16*30	12	45
130	45	80	85	170	265	340	M16*30	14	48.5
150	50	82	87	200	297	374	M16*30	14	53.5

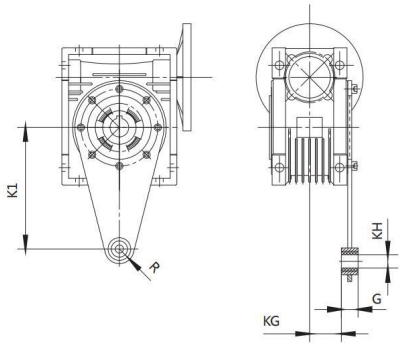
蜗杆尾出轴（E）/ Extension worm shaft(E)



NMRV	J	d(j6)	K	m	b1	t1
025	37	9	20	–	3	10.2
030	45	9	20	–	3	10.2
040	53	11	23	–	4	12.5
050	64	14	30	M6	5	16
063	75	19	40	M6	6	21.5
075	90	24	50	M8	8	27
090	108	24	50	M8	8	27
110	135	28	60	M10	8	31
130	155	30	80	M10	8	33
150	175	35	80	M12	10	38

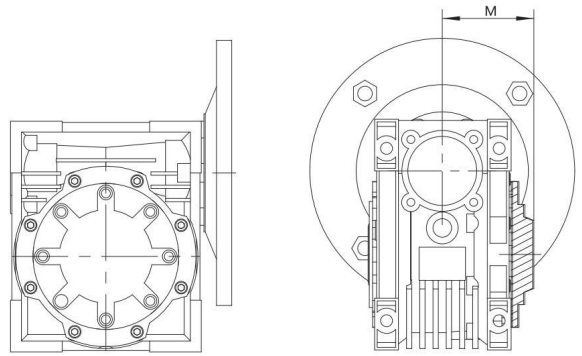
附件尺寸图表 / ACCESSORIES OUTLINE DIMENSION SHEET

扭力臂 / Toruqe Arm



NMRV	K1	G	KG	KH	R
025	70	14	17.5	8	15
030	85	14	24	8	15
040	100	14	31.5	10	18
050	100	14	38.5	10	18
063	150	14	49	10	18
075	200	25	47.5	20	30
090	200	25	57.5	20	30
110	250	30	62	25	35
130	250	30	69	25	35
150	250	30	85	25	35

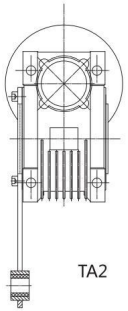
防尘盖 / Cover



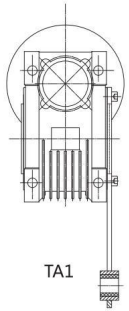
NMRV	M
030	42
040	50
050	58
063	69
075	74
090	85
110	94
130	102
150	117

安装方位图 / INSTALLATION POSITIONS DIAGRAM

扭力臂位置 / Torque arm Position



TA2

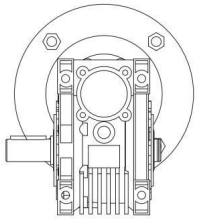


TA1

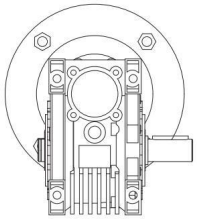
如果没有特殊要求，一般按出厂标准位置如图TA1方式和B3 位置提供。

Unless specified otherwise,the gear units is supplied with the flange in pos.TA1 referred to position B3.

单向输出轴位置 / Position diagram for single output shaft



DZ2

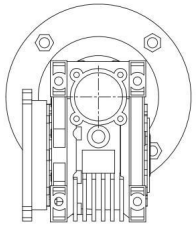


DZ1

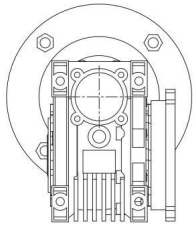
如果没有特殊要求，一般按出厂标准位置如图DZ1方式和B3位置提供。

Unless specified otherwise,the gear units is supplied with the flange in pos.DZ1 referred to position B3.

输出法兰位置 / Position diagram for output flange



F2



F1

如果没有特殊要求，一般按出厂标准位置如图F1方式和B3位置提供。

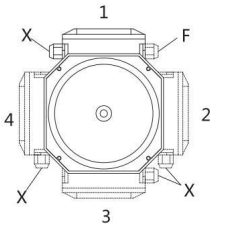
Unless specified otherwise,the gear units is supplied with the flange in pos.F1 referred to position B3.

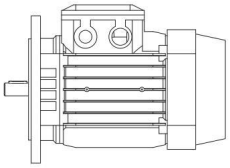
安装方位图 / INSTALLATION POSITIONS DIAGRAM

符号释意 / Symbols Used

符号/Symbol	含义/Meaning
	排气阀 Breather Valve
	油位塞 Oil level plug
	放油塞 Oil drain plug

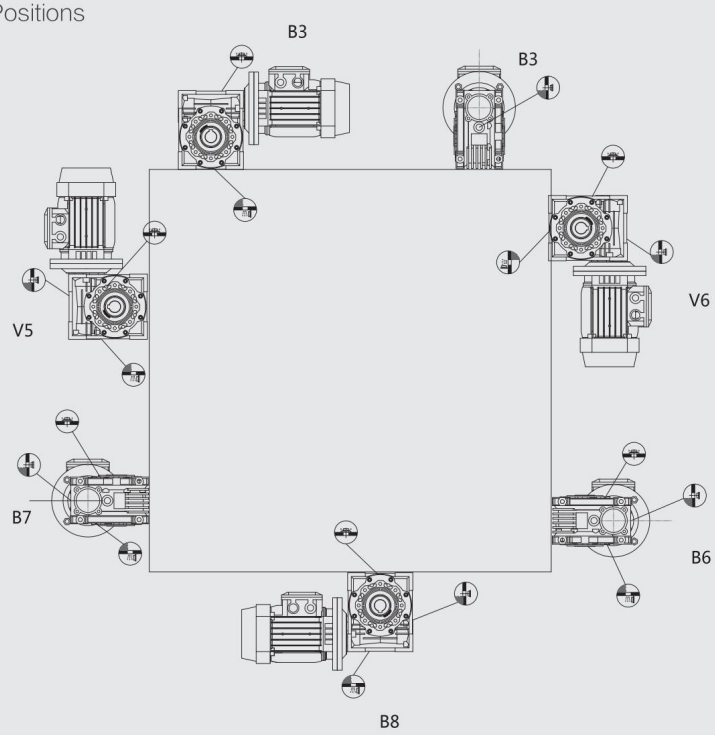
电机接线盒方位/Position of motor terminal box





X:标准接线位置
normal position

NMRV..安装方位 / Mounting Positions



NMRV..减速机参数/NMRV PARAMETER

NMRV	i	5	7.5	10	15	20	25	30	40	50	60	80	100
025	m	1.1	1.3	1.3	1.3	0.995	–	1.3	0.995	0.8	0.67	–	–
	Z1	6	4	3	2	2	–	1	1	1	1	–	–
	Z2	30	30	30	30	40	–	30	40	50	60	–	–
	γ	30° 58'	25° 18'	19° 31'	13° 18'	11° 02'	–	6° 44'	5° 34'	4° 34'	3° 54'	–	–
	ηd	0.87	0.85	0.83	0.97	0.75	–	0.67	0.62	0.58	0.55	–	–
	ηs	0.72	0.71	0.68	0.61	0.56	–	0.46	0.41	0.36	0.34	–	–
030	m	1.3	1.44	1.44	1.44	1.1	1.7	1.44	1.1	0.89	0.74	0.56	–
	Z1	6	4	3	2	2	1	1	1	1	1	1	–
	Z2	30	30	30	30	40	25	30	40	50	60	80	–
	γ	29° 03'	18° 55'	14° 25'	9° 44'	7° 49'	5° 33'	4° 54'	3° 55'	3° 17'	2° 43'	2° 07'	–
	ηd	0.87	0.856	0.829	0.782	0.673	0.7	0.667	0.62	0.567	0.52	0.422	–
	ηs	0.72	0.67	0.63	0.55	0.5	0.43	0.39	0.35	0.31	0.27	0.23	–
040	m	1.65	2.05	2.05	2.05	1.56	1.27	2.05	1.56	1.27	1.06	0.8	0.65
	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	Z2	30	30	30	30	40	50	30	40	50	60	80	100
	γ	30° 58'	23° 49'	18° 23'	12° 30'	10° 03'	8° 45'	6° 19'	5° 04'	4° 24'	3° 42'	2° 52'	2° 29'
	ηd	0.89	0.862	0.839	0.805	0.792	0.738	0.675	0.668	0.604	0.541	0.513	0.477
	ηs	0.74	0.71	0.67	0.6	0.55	0.51	0.45	0.4	0.36	0.32	0.28	0.24
050	m	2.25	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	Z2	30	30	30	30	40	50	30	40	50	60	80	100
	γ	30° 58'	23° 49'	18° 19'	12° 27'	10° 03'	8° 33'	6° 18'	5° 04'	4° 18'	3° 38'	2° 52'	2° 17'
	ηd	0.89	0.874	0.852	0.808	0.805	0.771	0.711	0.693	0.634	0.532	0.53	0.483
	ηs	0.74	0.7	0.66	0.59	0.55	0.51	0.44	0.39	0.35	0.32	0.27	0.23
063	m	–	3.25	3.25	3.25	2.48	2	3.25	2.48	2	1.68	1.27	1.02
	Z1	–	4	3	2	2	2	1	1	1	1	1	1
	Z2	–	30	30	30	40	50	30	40	50	60	80	100
	γ	–	24° 31'	18° 43'	12° 51'	10° 29'	8° 45'	6° 30'	5° 17'	4° 24'	3° 49'	2° 59'	2° 26'
	ηd	–	0.88	0.87	0.83	0.82	0.78	0.74	0.716	0.66	0.571	0.562	0.486
	ηs	–	0.71	0.67	0.6	0.55	0.51	0.45	0.4	0.32	0.33	0.28	0.24
075	m	–	3.95	3.95	3.95	3	2.42	3.95	3	2.42	2.02	1.54	1.24
	Z1	–	4	3	2	2	2	1	1	1	1	1	1
	Z2	–	30	30	30	40	50	30	40	50	60	80	100
	γ	–	26° 38'	20° 37'	14° 05'	11° 19'	9° 29'	7° 09'	5° 43'	4° 46'	4° 01'	3° 17'	2° 44'
	ηd	–	0.912	0.904	0.876	0.85	0.848	0.81	0.77	0.769	0.719	0.695	0.626
	ηs	–	0.71	0.68	0.61	0.57	0.53	0.46	0.42	0.38	0.35	0.29	0.26
090	m	–	4.84	4.84	4.48	3.69	2.98	4.84	3.69	2.98	2.5	1.89	1.52
	Z1	–	4	3	2	2	2	1	1	1	1	1	1
	Z2	–	30	30	30	40	50	30	40	50	60	80	100
	γ	–	29° 05'	22° 39'	15° 33'	12° 50'	10° 53'	7° 55'	6° 30'	5° 29'	4° 46'	3° 45'	3° 06'
	ηd	–	0.905	0.898	0.873	0.849	0.824	0.804	0.765	0.727	0.69	0.638	0.572
	ηs	–	0.73	0.7	0.64	0.6	0.56	0.49	0.45	0.41	0.38	0.32	0.28
110	m	–	5.875	5.875	5.875	4.62	3.73	5.875	4.62	3.73	3.13	2.37	1.91
	Z1	–	4	3	2	2	2	1	1	1	1	1	1
	Z2	–	30	30	30	40	50	30	40	50	60	80	100
	γ	–	28° 15'	21° 57'	15° 02'	14° 42'	12° 33'	7° 39'	7° 29'	6° 21'	5° 33'	4° 27'	3° 46'
	ηd	–	0.901	0.891	0.862	0.848	0.851	0.793	0.776	0.768	0.729	0.692	0.628
	ηs	–	0.72	0.69	0.63	0.62	0.59	0.48	0.48	0.44	0.41	0.36	0.32
130	m	–	6.97	6.97	6.97	5.4	4.37	6.97	5.4	4.37	3.67	2.77	2.23
	Z1	–	4	3	2	2	2	1	1	1	1	1	1
	Z2	–	30	30	30	40	50	30	40	50	60	80	100
	γ	–	28° 43'	22° 20'	15° 19'	13° 47'	11° 54'	7° 48'	7° 00'	6° 01'	5° 16'	4° 08'	3° 27'
	ηd	–	0.911	0.891	0.872	0.86	0.845	0.803	0.779	0.758	0.749	0.671	0.657
	ηs	–	0.72	0.69	0.63	0.61	0.58	0.49	0.46	0.43	0.39	0.34	0.3
150	m	–	5.4	6.16	5.4	6.16	5	4.2	6.16	5	4.2	3.15	2.5
	Z1	–	45	40	45	40	50	60	40	50	60	80	100
	Z2	–	6	4	3	2	2	2	1	1	1	1	1
	γ	–	29° 37'	24° 41'	15° 52'	12° 56'	11° 19'	9° 56'	6° 34'	5° 43'	5° 00'	3° 45'	2° 52'
	ηd	–	0.91	0.9	0.88	0.86	0.84	0.83	0.78	0.76	0.73	0.68	0.64
	ηs	–	0.73	0.71	0.66	0.6	0.57	0.54	0.45	0.42	0.39	0.33	0.29

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.06	280	5	1.8	439	6.2	NMRV025 56B14	5614
	186.7	7.5	2.6	503	4.2		
	140	10	3.4	553	3.5		
	93.3	15	4.9	633	2.5		
	70	20	6.2	697	1.9		
	46.7	30	8.3	798	1.6		
	35	40	10	878	1.2		
	28	50	12	946	0.9		
	23.3	60	14	1006	0.7		
	186.7	7.5	2.6	683	7.0	NMRV030 56B5/B14	5614
	140	10	3.4	752	5.4		
	93.3	15	4.7	861	3.9		
	70	20	6	948	3.1		
	56	25	7	1021	3.1		
	46.7	30	8	1085	2.5		
	35	40	9.7	1194	1.9		
	28	50	11	1286	1.5		
	23.3	60	13	1367	1.3		
	17.5	80	14	1504	0.9		
0.09	373.3	7.5	2.0	399	3.9	NMRV025 56B14	5612
	280	10	2.6	439	3.4		
	186.7	15	3.8	503	2.4		
	140	20	4.9	553	1.8		
	93.3	30	6.7	633	1.3		
	70	40	8.5	697	1.1		
	56	50	10	751	0.9		
	186.7	7.5	3.9	503	2.8	NMRV025 56B14	5624
	140	10	5.1	553	2.4		
	93.3	15	7.3	633	1.6		
	70	20	9.3	697	1.3		
	46.7	30	13	798	1.0		
	35	40	16	878	0.8		
	373.3	7.5	2.0	542	6.5	NMRV030 56B5/B14	5612
	280	10	2.6	597	5.0		
	186.7	15	3.7	683	3.5		
	140	20	4.7	752	2.5		
	112	25	5.5	810	2.9		
	93.3	30	6.4	861	2.3		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.09	70	40	8.0	948	1.8	NMRV030 56B5/B14	5612
	56	50	9.4	1021	1.4		
	46.7	60	10	1085	1.1		
	35	80	13	1194	0.9		
	186.7	7.5	3.9	683	4.7	NMRV030 56B5/B14	5624
	140	10	5.0	752	3.6		
	93.3	15	7.0	861	2.6		
	70	20	8.8	948	2.0		
	56	25	10	1021	2.1		
	46.7	30	12	1085	1.7		
	35	40	14	1194	1.2		
	28	50	17	1286	1.0		
	23.3	60	18	1367	0.9		
	28	50	19	2475	2.1	NMRV040 56B5	5624
	23.3	60	21	2630	1.7		
	17.5	80	25	2895	1.3		
	14	100	29	3118	1.0		
0.12	373.3	7.5	2.7	399	3.0	NMRV025 56B14	5622
	280	10	3.5	439	2.6		
	186.7	15	5.1	503	1.8		
	140	20	6.5	553	1.4		
	93.3	30	9.0	633	1.0		
	70	40	11	697	0.8		
	186.7	7.5	5.2	683	3.5	NMRV030 63B5/B14	6314
	140	10	6.6	752	2.7		
	93.3	15	9.3	861	1.9		
	70	20	12	948	1.5		
	56	25	14	1021	1.6		
	46.7	30	16	1085	1.3		
	35	40	19	1194	0.9		
	28	50	22	1286	0.8		
	46.7	30	17	2087	2.7	NMRV040 63B5/B14	6314
	35	40	21	2298	1.9		
	28	50	25	2475	1.6		
	23.3	60	28	2630	1.3		
	17.5	80	33	2895	1.0		
	14	100	38	3118	0.8		
	23.3	60	29	3610	2.3		
	17.5	80	35	3973	1.9		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.12	14	100	39	4280	1.4	NMRV050 63B5	6314
0.18	373.3	7.5	4.0	542	3.2	NMRV030 63B5/B14	6312
	280	10	5.2	597	2.5		
	186.7	15	7.4	683	1.8		
	140	20	9.5	752	1.3		
	112	25	11	810	1.4		
	93.3	30	13	861	1.2		
	70	40	16	948	0.9		
	186.7	7.5	7.7	683	2.3	NMRV030 63B5/B14	6324
	140	10	10	752	1.8		
	93.3	15	14	861	1.3		
	70	20	18	948	1.0		
	56	25	20	1021	1.0		
	46.7	30	24	1085	0.8		
	93.3	30	14	1657	2.5	NMRV040 63B5/B14	6312
	70	40	17	1824	1.8		
	56	50	21	1964	1.4		
	70	20	19	1824	2.1	NMRV040 63B5/B14	6324
	56	25	23	1964	1.7		
	46.7	30	25	2087	1.8		
	35	40	32	2298	1.3		
	28	50	37	2475	1.0		
	23.3	60	42	2630	0.9		
	45	20	28	2113	1.6	NMRV040 71B5/B14	7116
	36	25	34	2276	1.3		
	30	30	38	2419	1.3		
	22.5	40	47	2662	1.0		
	46.7	60	24	2865	2.1	NMRV050 63B5	6312
	35	80	30	3153	1.5		
	28	100	34	3397	1.2		
	35	40	33	3153	2.3	NMRV050 63B5	6324
	28	50	39	3397	1.9		
	23.3	60	43	3610	1.6		
	17.5	80	52	3973	1.2		
	14	100	59	4280	0.9		
	18	50	56	3936	1.4	NMRV050 71B5/B14	7116
	15	60	63	4183	1.1		
	11.3	80	75	4604	0.9		
	15	60	66	5467	2.1	NMRV063 71B5/B14	7116

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.18	11.3	80	79	6018	1.6	NMRV063 71B5/B14	7116
	9	100	90	6270	1.4		
0.25	373.3	7.5	5.6	542	2.3	NMRV030 63B5/B14	6322
	280	10	7.2	597	1.8		
	186.7	15	10	683	1.3		
	140	20	13	752	0.9		
	112	25	15	810	1.0		
	93.3	30	18	861	0.8		
	186.7	7.5	11	1315	3.6	NMRV040 71B5/B14	7114
	140	10	14	1447	2.8		
	93.3	15	20	1657	2.0		
	70	20	26	1824	1.5		
	56	25	32	1964	1.2		
	46.7	30	35	2087	1.3		
	35	40	44	2298	0.9		
	120	7.5	17	1524	2.6	NMRV040 71B5/B14	7126
	90	10	22	1677	2.0		
	60	15	31	1920	1.4		
	45	20	39	2113	1.1		
	36	25	48	2276	0.9		
	30	30	53	2419	0.9		
	35	80	42	3153	1.1	NMRV050 63B5/B14	6322
	28	100	48	3397	0.8		
	70	20	27	2503	2.7	NMRV050 63B5/B14	7114
	56	25	32	2696	2.2		
	46.7	30	36	2865	2.3		
	35	40	46	3153	1.7		
	28	50	54	3397	1.4		
	23.3	60	60	3610	1.1		
	17.5	80	72	3973	0.9		
	45	20	40	2900	1.9	NMRV050 71B5/B14	7126
	36	25	48	3124	1.5		
	30	30	54	3320	1.7		
	22.5	40	67	3654	1.2		
	18	50	78	3936	1.0		
	15	60	88	4193	0.8		
	28	50	55	4440	2.4	NMRV063 71B5/B14	7114
	23.3	60	63	4719	2.0		
	17.5	80	76	5193	1.6		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.25	14	100	87	5595	1.4	NMRV063 71B5/B14	7114
	18	50	81	5145	1.8	NMRV063 71B5/B14	7126
	15	60	92	5467	1.5		
	11.3	80	110	6018	1.2		
	9	100	125	6270	1.0		
	17.5	80	80	6130	2.4	NMRV075 71B5	7114
	14	100	94	6603	1.9		
	11.3	80	117	7103	1.7	NMRV075 71B5	7126
	9	100	133	7380	1.4		
0.37	373.3	7.5	8.3	1044	3.4	NMRV040 71B5/B14	7112
	280	10	11	1149	2.6		
	186.7	15	16	1315	1.9		
	140	20	20	1447	1.4		
	112	25	25	1559	1.1		
	186.7	7.5	16	1315	2.5	NMRV040 71B5/B14	7124
	140	10	21	1447	1.9		
	93.3	15	30	1657	1.3		
	70	20	39	1824	1.0		
	56	25	47	1964	0.8		
	46.7	30	52	2087	0.9		
	112	25	25	2140	2.0	NMRV050 71B5/B14	7112
	93.3	30	29	2274	2.2		
	70	40	37	2503	1.6		
	56	50	44	2696	1.2		
	46.7	60	50	2865	1.0		
	35	80	62	3153	0.7		
	140	10	21	1987	3.4	NMRV050 71B5/B14	7124
	93.3	15	31	2274	2.4		
	70	20	39	2503	1.9		
	56	25	47	2696	1.5		
	46.7	30	54	2865	1.6		
	35	40	68	3153	1.1		
	28	50	80	3397	0.9		
	23.3	60	89	3610	0.8		
	120	7.5	25	2091	3.4	NMRV050 71B5/B14	8016
	90	10	33	2302	2.6		
	60	15	47	2635	1.8		
	45	20	59	2900	1.3		
	36	25	72	3124	1.0		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.37	30	30	80	3320	1.1	NMRV050 80B5/B14	8016
	35	40	70	4122	2.1	NMRV063 71B5/B14	7124
	28	50	82	4440	1.6		
	23.3	60	94	4719	1.4		
	17.5	80	113	5193	1.1		
	14	100	129	5595	0.9		
	45	20	60	3791	2.4	NMRV063 80B5/B14	8016
	36	25	73	4084	1.9		
	30	30	82	4339	2.1		
	22.5	40	102	4776	1.6		
	18	50	120	5145	1.2		
	15	60	137	5467	1.0		
	23.3	60	97	5569	2.1	NMRV075 71B5	7124
	17.5	80	119	6130	1.6		
	14	100	139	6603	1.3		
	18	50	124	6073	1.8	NMRV075 80B5/B14	8016
	15	60	141	6453	1.5		
	11.3	80	173	7103	1.2		
	9	100	196	7380	1.0		
	11.3	80	185	7859	1.7	NMRV090 80B5/B14	8016
	9	100	212	8180	1.3		
0.55	373.3	7.5	12	1044	2.3	NMRV040 71B5/B14	7122
	280	10	16	1149	1.8		
	186.7	15	24	1315	1.3		
	140	20	30	1447	1.0		
	112	25	37	1559	0.8		
	140	20	31	1987	1.7	NMRV050 71B5/B14	7122
	112	25	38	2140	1.4		
	93.3	30	43	2274	1.5		
	70	40	55	2503	1.1		
	56	50	65	2696	0.8		
	46.7	60	74	2865	0.7		
	186.7	7.5	24	1805	2.9	NMRV050 80B5/B14	8014
	140	10	32	1987	2.3		
	93.3	15	46	2274	1.6		
	70	20	59	2503	1.2		
	56	25	70	2696	1.0		
	46.7	30	80	2865	1.1		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.55	120	7.5	37	2091	2.3	NMRV050 80B5/B14	8026
	90	10	48	2302	1.7		
	60	15	69	2635	1.2		
	45	20	88	2900	0.9		
	70	40	56	3272	1.9	NMRV063 71B5/B14	7122
	56	50	68	3524	1.5		
	46.7	60	78	3745	1.2		
	35	80	96	4122	0.9		
	28	100	111	4440	0.7		
	70	20	60	3272	2.2	NMRV063 80B5/B14	8014
	56	25	72	3524	1.8		
	46.7	30	82	3745	1.9		
	35	40	104	4122	1.4		
	28	50	122	4440	1.1		
	23.3	60	140	4719	0.9		
	60	15	70	3444	2.2	NMRV063 80B5/B14	8026
	45	20	90	3791	1.6		
	36	25	108	4084	1.3		
	30	30	123	4339	1.4		
	22.5	40	152	4776	1.1		
	35	80	99	4865	1.3	NMRV075 71B5	7122
	28	100	116	5241	1.0		
	35	40	108	4865	2.0	NMRV075 80B5/B14	8014
	28	50	128	5241	1.6		
	23.3	60	144	5569	1.4		
	17.5	80	177	6130	1.1		
	14	100	206	6603	0.9		
	30	30	124	5122	2.1	NMRV075 80B5/B14	8026
	22.5	40	156	5637	1.5		
	18	50	184	6073	1.2		
	15	60	210	6453	1.0		
	17.5	80	189	6783	1.5	NMRV090 80B5/B14	8014
	14	100	221	7306	1.2		
	18	50	196	6719	2.0	NMRV090 80B5/B14	8026
	15	60	224	7140	1.6		
	11.3	80	275	7859	1.1		
	9	100	315	8180	0.9		
	17.5	80	201	8571	2.6	NMRV110 80B5	8014
	14	100	236	9232	2.0		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.55	11.3	80	294	9931	1.9	NMRV110 80B5	8026
	9	100	344	10320	1.5		
0.75	373.3	7.5	17	1433	3.0	NMRV050 80B5/B14	8012
	280	10	22	1577	2.4		
	186.7	15	31	1805	1.7		
	140	20	41	1987	1.3		
	112	25	49	2140	1.0		
	93.3	30	56	2274	1.1		
	280	5	23	1577	2.7	NMRV050 80B5/B14	8024
	186.7	7.5	33	1805	2.1		
	140	10	43	1987	1.7		
	93.3	15	62	2274	1.2		
	70	20	80	2503	0.9		
	140	20	43	2597	2.3	NMRV063 80B5/B14	8012
	112	25	52	2797	1.8		
	93.3	30	60	2973	2.0		
	70	40	77	3272	1.4		
	56	50	92	3524	1.1		
	46.7	60	106	3745	0.9		
	93.3	15	63	2973	2.2	NMRV063 80B5/B14	8024
	70	20	82	3272	1.6		
	56	25	98	3524	1.3		
	46.7	30	112	3745	1.4		
	35	40	141	4122	1.0		
	120	7.5	51	2734	2.9	NMRV063 90B5/B14	90S6
	90	10	67	3009	2.3		
	60	15	96	3444	1.6		
	45	20	123	3791	1.2		
	36	25	147	4084	0.9		
	30	30	167	4339	1.0		
	46.7	60	107	4421	1.3	NMRV075 90B5/B14	8012
	35	80	135	4865	1.0		
	28	100	159	5241	0.8		
	56	25	101	4160	2.0	NMRV075 90B5/B14	8024
	46.7	30	117	4421	2.0		
	35	40	147	4865	1.5		
	28	50	174	5241	1.2		
	23.3	60	196	5569	1.0		
	60	15	97	4065	2.4	NMRV075 90B5/B14	90S6

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
0.75	45	20	124	4474	1.9	NMRV075 90B5/B14	90S6
	36	25	149	4820	1.4		
	30	30	170	5122	1.5		
	22.5	40	213	5637	1.1		
	35	80	143	5383	1.6	NMRV090 80B5/B14	8012
	28	100	169	5799	1.2		
	28	50	182	5799	1.9	NMRV090 80B5/B14	8024
	23.3	60	209	6163	1.5		
	17.5	80	258	6783	1.1		
	14	100	302	7306	0.9		
	30	30	179	5667	2.6	NMRV090 80B5/B14	90S6
	22.5	40	226	6238	1.8		
	18	50	267	6719	1.5		
	15	60	306	7140	1.1		
	17.5	80	274	8571	1.9	NMRV110 80B5	8024
	14	100	322	9232	1.5		
	15	60	325	9023	2.1	NMRV110 90B5	90S6
	11.3	80	401	9931	1.4		
	9	100	470	10320	1.1		
	11.3	80	401	12989	2.1	NMRV130 90B5	90S6
	9	100	470	13500	1.7		
1.1	373.3	7.5	25	1433	2.1	NMRV050 80B5/B14	8022
	280	10	33	1577	1.7		
	186.7	15	48	1805	1.2		
	140	20	62	1987	0.9		
	186.7	15	46	2359	2.1	NMRV063 80B5/B14	8022
	140	20	60	2597	1.6		
	112	25	72	2797	1.2		
	93.3	30	82	2973	1.4		
	70	40	104	3272	1.0		
	120	7.5	75	2734	2.0	NMRV063 90B5/B14	90L6
	90	10	98	3009	1.6		
	60	15	140	3444	1.1		
	45	20	180	3791	0.8		
	186.7	7.5	50	2359	2.6	NMRV063 90B5/B14	90S4
	140	10	65	2597	2.0		
	93.3	15	92	2973	1.5		
	70	20	120	3272	1.1		
	56	25	144	3524	0.9		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
1.1	46.7	30	164	3745	1.0	NMRV063 90B5/B14	90S4
	112	25	77	3302	2.0	NMRV075 80B5/B14	8022
	93.3	30	89	3509	1.9		
	70	40	114	3862	1.4		
	56	50	137	4160	1.1		
	46.7	60	158	4421	0.9		
	90	10	98	3551	2.3	NMRV075 90B5/B14	90L6
	60	15	142	4065	1.7		
	45	20	182	4474	1.3		
	36	25	19	4820	1.0		
	30	30	249	5122	1.0		
	93.3	15	95	3509	2.1	NMRV075 90B5/B14	90S4
	70	20	122	3862	1.7		
	56	25	148	4160	1.3		
	46.7	30	171	4421	1.3		
	35	40	216	4865	1.0		
	35	80	210	5383	1.1	NMRV090 80B5/B14	8022
	28	100	248	5799	0.8		
	36	25	228	5333	1.6	NMRV090 90B5/B14	90L6
	30	30	263	5667	1.8		
	22.5	40	331	6238	1.2		
	18	50	391	6719	1.0		
	15	60	448	7140	0.8		
	35	40	222	5383	1.6	NMRV090 90B5/B14	90S4
	28	50	266	5799	1.3		
	23.3	60	306	6163	1.0		
	22.5	40	345	7882	2.3	NMRV110 90B5	90L6
	18	50	414	8491	1.8		
	15	60	476	9023	1.4		
	11.3	80	588	9931	1.0		
	28	50	278	7328	2.4	NMRV110 90B5	90S4
	23.3	60	324	7787	1.9		
	17.5	80	402	8571	1.3		
	14	100	473	9232	1.0		
	11.3	80	588	12989	1.5	NMRV130 90B5	90L6
	9	100	689	13500	1.1		
	17.5	80	408	11210	2.1	NMRV130 90B5	90S4
	14	100	480	12076	1.5		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
1.5	373.3	7.5	34	1433	1.5	NMRV050 80B5/B14	8032
	280	10	45	1577	1.2		
	186.7	15	65	1805	0.9		
	186.7	7.5	68	2359	1.9	NMRV063 90B5/B14	90L4
	140	10	88	2597	1.5		
	93.3	15	126	2973	1.1		
	70	20	164	3272	0.8		
	373.3	7.5	35	1873	2.7	NMRV063 90B5/B14	90S2
	280	10	45	2061	2.2		
	186.7	15	66	2359	1.6	NMRV063 90B5/B14	90S2
	140	20	86	2597	1.2		
	112	25	105	2797	0.9		
	93.3	30	120	2973	1.0		
	120	7.5	103	3227	2.1	NMRV075 100B5/B14	100L6
	90	10	134	3551	1.7		
	60	15	193	4065	1.2		
	56	50	187	4160	1.3	NMRV075 90B5/B14	90S2
	46.7	60	215	4421	1.1		
	140	10	89	3065	2.2	NMRV075 90B5/B14	90L4
	93.3	15	129	3509	1.6		
	70	20	166	3862	1.3		
	56	25	202	4160	1.0		
	46.7	30	233	4421	1.0		
	280	10	45	2433	3.2	NMRV075 90B5/B14	90S2
	186.7	15	66	2785	2.3		
	140	20	86	3065	1.9		
	112	25	105	3302	1.4		
	93.3	30	121	3509	1.4		
	70	40	156	3862	1.1		
	90	10	137	3929	2.7	NMRV090 100B5/B14	100L6
	60	15	198	4498	2.1		
	45	20	258	4951	1.5		
	36	25	310	5333	1.2		
	30	30	358	5667	1.3		
	70	20	170	4273	2.1	NMRV090 90B5/B14	90L4
	56	25	207	4603	1.6		
	46.7	30	239	4891	1.7		
	35	40	303	5383	1.2		
	28	50	363	5799	0.9		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
1.5	23.3	60	417	6163	0.8	NMRV090 90B5/B14	90L4
	56	50	197	4603	1.3	NMRV090 90B5/B14	90S2
	46.7	60	227	4891	1.1		
	45	20	264	6256	2.7	NMRV110 100B5/B14	100L6
	36	25	322	6739	2.4		
	30	30	363	7161	2.3		
	22.5	40	471	7882	1.7		
	18	50	565	8491	1.3		
	15	60	649	9023	1.1		
	35	40	315	6803	2.2	NMRV110 90B5	90L4
	28	50	379	7328	1.7		
	23.3	60	442	7787	1.4		
	17.5	80	548	8571	0.9		
	46.7	60	236	6181	2.0	NMRV110 90B5	90S2
	35	80	299	6803	1.3		
	28	100	358	7328	1.0		
	22.5	40	471	10309	2.3	NMRV130 100B5	100L6
	18	50	565	11105	1.9		
	15	60	659	11801	1.4		
	11.3	80	802	12989	1.1		
	17.5	80	557	11210	1.5	NMRV130 90B5	90L4
	14	100	655	12076	1.1		
2.2	373.3	7.5	51	1873	1.8	NMRV063 90B5/B14	90L2
	280	10	66	2061	1.5		
	186.7	15	97	2359	1.1		
	186.7	7.5	99	2785	1.9	NMRV075 100B5/B14	100L1~4
	140	10	131	3065	1.5		
	93.3	15	189	3509	1.1		
	373.3	7.5	50	2210	2.6	NMRV075 90B5/B14	90L2
	280	10	66	2433	2.2		
	186.7	15	97	2785	1.5		
	140	20	126	3065	1.3		
	112	25	154	3302	1.0	NMRV075 100B5/B14	90L2
	93.3	30	178	3509	1.0		
	186.7	7.5	100	3081	2.9	NMRV090 100B5/B14	100L1~4
	140	10	132	3391	2.3		
	93.3	15	191	3882	1.9		
	70	20	249	4273	1.4		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
2.2	56	25	304	4603	1.1	NMRV090 100B5/B14	100L1~4
	46.7	30	351	4891	1.2		
	120	7.5	154	3570	2.2	NMRV090 112B5/B14	112M6
	90	10	201	3929	1.8		
	60	15	291	4498	1.4		
	45	20	378	4951	1.0		
	140	20	129	3391	2.0	NMRV090 90B5/B14	90L2
	112	25	159	3653	1.6		
	93.3	30	185	3882	1.7		
	70	40	237	4273	1.2		
	56	50	289	4603	0.9		
	70	20	255	5399	2.5	NMRV110 100B5	100L1~4
	56	25	311	5816	2.2		
	46.7	30	356	6181	2.0		
	35	40	462	6803	1.5		
	28	50	555	7328	1.2		
	23.3	60	648	7787	1.0		
	90	10	203	4965	3.5	NMRV110 112B5	112M6
	60	15	294	5684	2.6		
	45	20	388	6256	1.9		
	36	25	473	6739	1.6		
	30	30	532	7161	1.6		
	112	25	161	4616	3.1	NMRV110 90B5	90L2
	93.3	30	187	4905	3.0		
	70	40	243	5399	2.2		
	56	50	296	5816	1.7		
	46.7	60	347	6181	1.4		
	35	40	468	8897	2.2	NMRV110 100B5	100L1~4
	28	50	563	9584	1.7		
	23.3	60	657	10185	1.4		
	17.5	80	816	11210	1.0		
	36	25	473	8814	2.2	NMRV130 112B5	112M6
	30	30	539	9366	2.2		
	22.3	40	691	10309	1.6		
	18	50	829	11105	1.3		
	15	60	966	11801	1.0		
	35	80	444	8897	1.3	NMRV130 90B5	90L2
	28	100	525	9574	1.0		
	28	50	570	13103	2.5	NMRV150 100B5	100L1~4

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
2.2	23.3	60	657	13924	1.9	NMRV150 100B5	100L1-4
	17.5	80	816	15325	1.4		
	14	100	960	16508	1.0		
3.0	373.3	7.5	68	2210	1.9	NMRV075 100B5/B14	100L2
	280	10	90	2433	1.6		
	186.7	7.5	135	2785	1.4	NMRV075 100B5/B14	100L2-4
	140	10	178	3065	1.1		
	93.3	15	258	3509	0.8		
	373.3	7.5	70	2446	3.0	NMRV090 100B5/B14	100L2
	280	10	92	2692	2.6		
	186.7	7.5	137	3081	2.1	NMRV090 100B5/B14	100L2-4
	140	10	180	3391	1.7		
	93.3	15	261	3882	1.4		
	70	20	340	4273	1.0		
	56	25	414	4603	0.8		
	46.7	30	479	4891	0.9		
	93.3	15	264	4905	2.5	NMRV110 100B5	100L2-4
	70	20	348	5399	1.9		
	56	25	425	5816	1.6		
	46.7	30	485	6181	1.5		
	35	40	630	6803	1.1		
	28	50	757	7328	0.9		
	120	7.5	210	4511	3.1	NMRV110 100B5	132S6
	90	10	277	4965	2.6		
	60	15	401	5684	1.9		
	45	20	528	6256	1.4		
	56	25	430	7607	2.2	NMRV130 100B5	100L2-4
	46.7	30	491	8084	2.1		
	35	40	638	8897	1.6		
	28	50	767	9584	1.3		
	23.3	60	896	10185	1.0		
	17.5	80	1113	11210	0.8		
	90	10	277	6494	3.5	NMRV130 132B5	132S6
	60	15	406	7434	2.6		
	45	20	528	8182	2.0		
	36	25	645	8814	1.6		
	30	30	735	9366	1.6		
	22.5	40	942	10309	1.2		

NMRV..性能参数 / PERFORMANCE PARAMETER

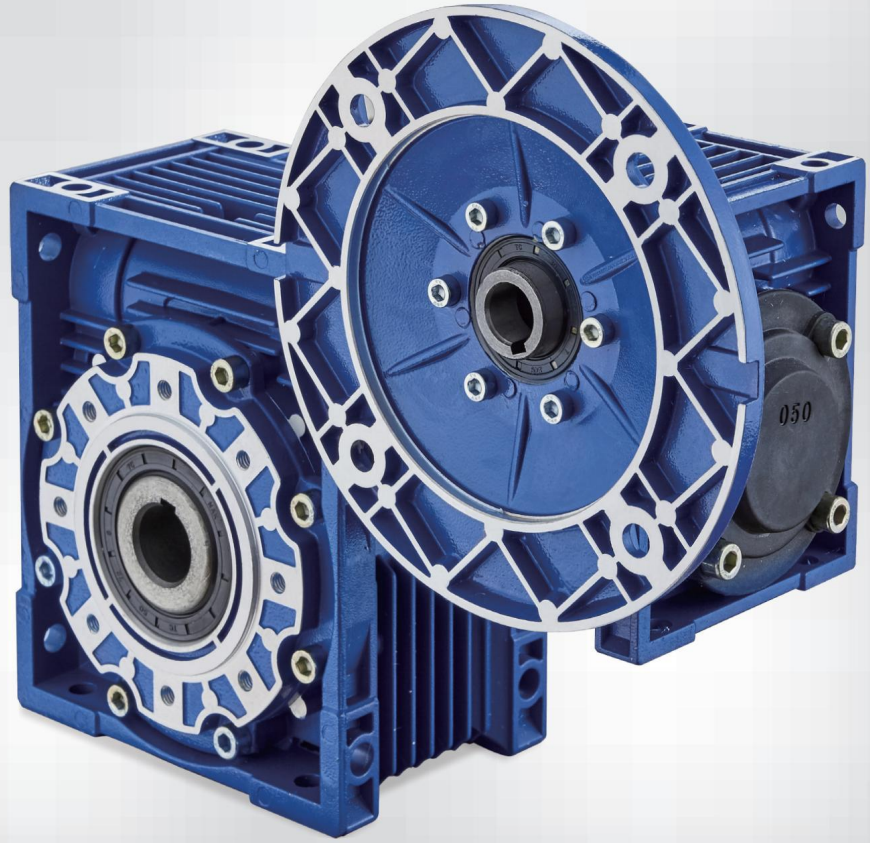
P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
3.0	28	50	778	13103	1.8	NMRV150 100B5	100L2-4
	23.3	60	896	13924	1.4		
	17.5	80	1113	15325	1.0		
	14.0	100	1310	16508	0.8		
4.0	373.3	7.5	91	2210	1.4	NMRV075 112B5/B14	112M2
	280	10	120	2433	1.2		
	186.7	7.5	180	2785	1.0	NMRV075 112B5/B14	112M4
	140	10	237	3065	0.8		
	373.3	7.5	93	2446	2.3	NMRV090 112B5/B14	112M2
	280	10	123	2692	1.9		
	186.7	7.5	182	3081	1.6	NMRV090 112B5	112M4
	140	10	240	3391	1.3		
	93.3	15	348	3882	1.0		
	70	20	453	4273	0.8		
	140	10	240	4285	2.5	NMRV110 112B5	112M4
	93.3	15	352	4905	1.9		
	70	20	464	5399	1.4		
	56	25	566	5816	1.2		
	46.7	30	647	6181	1.1		
	120	7.5	280	4511	2.3	NMRV110 132B5	132M1-6
	90	10	369	4965	1.9		
	60	15	535	5684	1.4		
	56	25	573	7607	1.6	NMRV130 112B5	112M4
	46.7	30	655	8084	1.6		
	35	40	851	8897	1.2		
	28	50	1023	9584	1.0		
	23.3	60	1195	10185	0.8		
	120	7.5	283	5901	3.1	NMRV130 132B5	132M1-6
	90	10	369	6494	2.6		
	60	15	541	7434	2.0		
	45	20	705	8182	1.5		
	36	25	860	8814	1.2		
	28	50	1037	13103	1.4	NMRV150 112B5	112M4
	23.3	60	1195	13924	1.1		
	17.5	80	1484	15325	0.8		
5.5	186.7	7.5	250	3893	2.2	NMRV110 132B5	132S4
	140	10	330	4285	1.8		
	93.3	15	484	4905	1.4		
	70	20	638	5399	1.0		

NMRV..性能参数 / PERFORMANCE PARAMETER

P_{1n} [kW]	n_2 [r/min]	i	M_{2max} [Nm]	F_{r2} [N]	fs		
5.5	140	10	334	5605	2.5	NMRV130 132B5	132S4
	93.3	15	490	6416	1.9		
	70	20	638	7062	1.4		
	56	25	788	7607	1.2		
	46.7	30	900	8084	1.2		
	35	40	1171	8897	0.9		
	70	20	645	9654	2.0	NMRV150 132B5	132S4
	56	25	788	10400	1.5		
	46.7	30	934	11051	1.3		
	35.0	40	1171	12163	1.3		
	28.0	50	1426	13103	1.0		
	23.3	60	1643	13924	0.8		
7.5	186.7	7.5	341	3893	1.6	NMRV110 132B5	132M4
	140	10	450	4285	1.3		
	93.3	15	660	4905	1.0		
	186.7	7.5	345	5092	2.2	NMRV130 132B5	132M4
	140	10	455	5605	1.8		
	93.3	15	688	6416	1.4		
	70	20	870	7062	1.0		
	56	25	1074	7607	0.9		
	46.7	30	1228	8084	0.8		
	35	40	1596	8897	0.7		
	70	20	880	9654	1.5	NMRV150 132B5	132M4
	56	25	1074	10400	1.1		
	46.7	30	1274	11051	0.9		
	35	40	1596	12163	1.0		
11	186.7	7.5	512	6962	2.3	NMRV150 160B5	160M4
	140	10	675	7663	1.8		
	93.3	15	990	8771	1.3		
	70	20	1291	9654	1.0		
	56	25	1576	10400	0.8		
15	186.7	7.5	698	6962	1.7	NMRV150 160B5	160L4
	140	10	921	7663	1.3		
	93.3	15	1351	8771	0.9		
	70	20	1760	9654	0.7		

DRV DOUBLE WORM GEAR COMBINATION

DRV双蜗轮组合



DRV减速机型号 / DRV DECELERATION TYPE

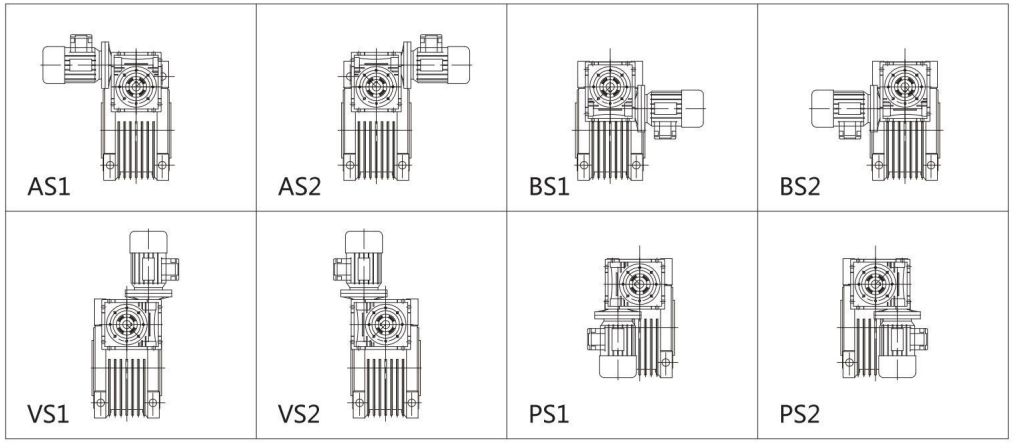
NMRV减速机本身可以组合成一个双级联体减速机（DRV）。DRV的传动比即为第一级NMRV和第二级NMRV传动比的乘积，可将传动比拓展至i=10000的范围。

DRV并不是两个NMRV的简单组合，合理的组合应使两个减速机达到一致的工况。因此第二级减速机的基座规格要大于第一集减速机的基座规格。

NMRV reducers can be combined as a double reducers combination(DRV).The ratio of DRV is just the product of the first stage and second stage NMRV’s ratio.So the ratio can be extended to i=10000

DRV is not only simply combination of two NMRV reducers.the reasonably combinations should make two reducers operating at same condition.therefore the frame size of the second stage reducer should be bigger than the first stage reducer.

DRV..安装方位 / MOUNTING POSITIONS



如果没有特殊要求，一般按出厂标准位置如图AS2组合方式和B3位置提供。
Unless specified otherwise,the gear units is supplied with the flange in pos.AS2 referred to position B3

型号说明 / MODEL ILLUMINATE

DRV	–	50 / 75	–	500	E	F	VS_1	80B5
1		2		3	4	5	6	7

序号	说明	NO.	说明
1	双涡轮减速机代号	1	Double worm gear unit codes
2	减速机中心距	2	The distance of centre to centre
3	减速机速比	3	Ratio
4	蜗杆同向尾出轴	4	The extension worm shaft
5	输出法兰	5	output flange
6	安装方式	6	Installation position
7	电机机座号	7	The frame of moter

选型相关参数 / RELEVANT PARAMETER

功率 P / POWER P

$$P_1=P_2/\eta\,(kw) \qquad P_{1n}\geqslant P_1\cdot fs\,(kW)$$

P_{1n}	P_1	P_2	fs	η
输入电机额定功率 Rated input motor power	输入功率 Input power	输出功率 Rated output motor power	服务系数 service factor	传动效率 Transmission effciency

转速 n / Rotation speed n

n_1 减速机输入转速 Gear units input speed

n_2 减速机输出转速 Gear units output speed

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下降

If driven by the extemal gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life.Higher input rotation speed is permitted, but in this situation,the rated torque M_2 will be reduced

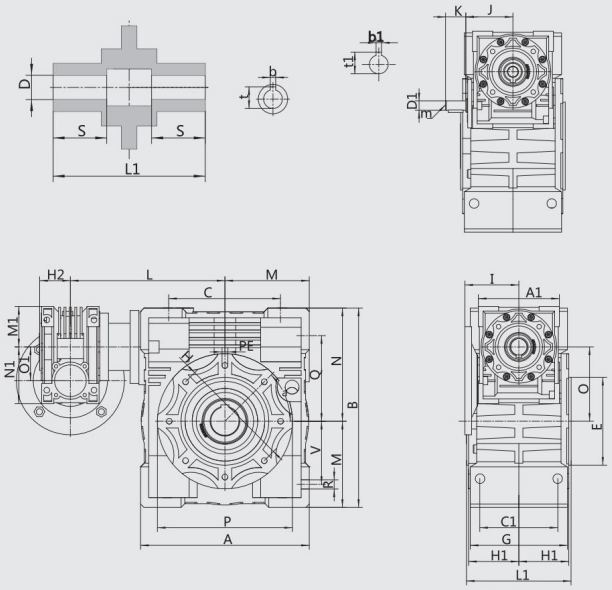
传动比 i / Transmission ratio i

$$i=n_1/n_2$$

传动比通常为小数，在选型表中保留与两位小数

Usually transmission ratio is decimal fraction with 2 radix point tagged in selection tables.

NMRV外形尺寸图表 / OUTLINE DIMENSION SHEET



DRV	A	A1	B	C	C1	D(H7)	D1(j6)	E(h8)	G	H	H1	H2	I	J	K	L	L1	M	M1
025/030	80	70	97	54	44	14	9	55	56	65	29	22.5	45	37	20	100	63	40	35
025/040	100	70	121.5	70	60	18(19)	9	60	71	75	36.5	22.5	45	37	20	115	78	50	35
030/040	100	80	121.5	70	60	18(19)	9	60	71	75	36.5	29	55	51	20	120	78	50	40
030/050	120	80	144	80	70	25(24)	9	70	85	85	43.5	29	55	51	20	130	92	60	40
030/063	144	80	174	100	85	25(28)	9	80	103	95	53	29	55	51	20	145	112	72	40
040/075	172	100	205	120	90	28(35)	11	95	112	115	57	36.5	70	60	23	165	120	86	50
040/090	206	100	238	140	100	35(38)	11	110	130	130	67	36.5	70	60	23	182	140	103	50
050/110	255	120	295	170	115	42	14	130	144	165	74	43.5	80	74	30	225	155	127.5	60
063/130	293	144	335	200	120	45	19	180	155	215	81	53	95	90	40	245	170	146.5	72
063/150	340	144	400	240	145	50	19	180	185	215	96	53	95	90	40	275	200	170	72

DRV	N	N1	O	O1	P	Q	R	S	V	PE	α	b	b1	t	t1	m
025/030	57	48	30	25	75	44	6.5	21	27	M6×10（n=4）	0°	5	3	16.3	10.2	–
025/040	71.5	48	40	25	87	55	6.5	26	35	M6×10（n=4）	45°	6	3	20.8(21.8)	10.2	–
030/040	71.5	57	40	30	87	55	6.5	26	35	M6×10（n=4）	45°	6(6)	3	20.8(21.8)	10.2	–
030/050	84	57	50	30	100	64	8.5	30	40	M8×10（n=4）	45°	8(8)	3	28.3(27.3)	10.2	–
030/063	102	57	63	30	110	80	8.5	36	50	M8×14（n=8）	45°	8(8)	3	28.3(31.3)	10.2	–
040/075	119	71.5	75	40	140	93	11	40	60	M8×14（n=8）	45°	8(10)	4	31.3(38.3)	12.5	–
040/090	135	71.5	90	40	160	102	13	45	70	M10×18（n=8）	45°	10	4	38.3(41.3)	12.5	–
050/110	167.5	84	110	50	200	125	14	50	85	M10×18（n=8）	45°	12	5	45.3	16	–
063/130	187.5	102	130	63	250	140	16	60	100	M12×21（n=8）	45°	14	6	48.8	21.5	M6
063/150	230	102	150	63	250	180	18	72.5	120	M12×21（n=8）	45°	14	6	53.8	21.5	M6



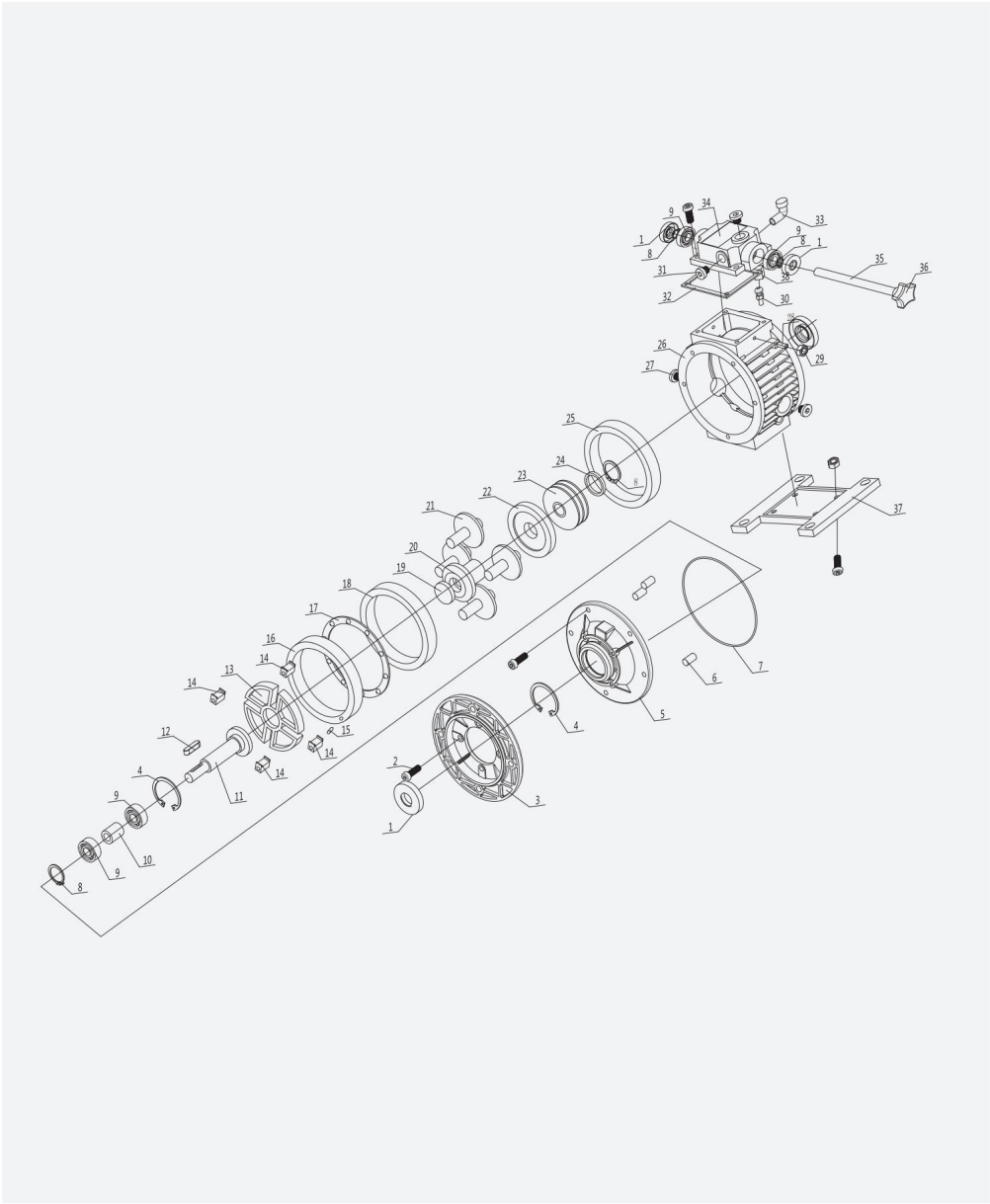
UDL无级变速机
UDL STEPLESS SPEED CHANGER

UDL series planet cone–disk stepless speed variator merges domestic and overseas advanced technique and craftsmanship. It chooses high–grade material thrangh light perasion machining.The die–casting is made of begh quality aluminium alloy It has merits such as beautiful appearance,small volume,light weight,hight transmission eficiency.quick heat dissipation,low noise,flexible installation,convenient use,long lift,etc





结构分解图 / STRUCTURE DIAGRAM



序号	名称	序号	名称
1	油封/Oil seal	20	主动轮/Active wheel
2	内六角螺栓/inner hex screw	21	行星锥盘/Planet cone-disk
3	输出法兰/Output flanges	22	压盘/Pressure plate
4	孔用挡圈/Hole-circlip	23	碟形弹簧/Will spring
5	输出端盖/Output cover	24	挡圈/Block circle
6	弹簧/Spring	25	定环/Set ring
7	O型橡胶密封圈/O-ring	26	箱体/Case
8	轴用挡圈/shaft-circlip	27	视油镜/Depending on oil mirror
9	轴承/Bearing	28	螺栓/Bolt
10	轴承隔套/The bearing spacer	29	螺母/Nut
11	输出轴/Output shaft	30	球头调速柄/Ball head speed control handle
12	平键/Parallel key	31	油塞/Oil plug
13	转臂/Turn arm	32	橡胶垫片/Rubber gaskets
14	滑块/Slider	33	弯管/Bent pipe
15	弹性圆柱销/Elastic cylindrical pin	34	操作盖/Operating cover
16	固定凸轮/Fixed CAM	35	丝杆/Screw
17	滚珠环/Ball ring	36	调速柄/Speed control handle
18	调速凸轮/Speed CAM	37	底脚/Foot bottom
19	平面油封/Plane oil seal	38	调速螺母/Speed nuts

产品概述 / SUMMARIZE

UDL系列行星锥盘无极变速器融合了国内外先进技术和工艺，用材高级、加工精良、壳体采用优质铝合金压铸成型。本机具有造型美观、重量轻、体积小、传动效率高、散热快、噪音低、安装灵活、使用方便、寿命长等优点。

UDL系列行星锥盘无极变速器可与各类减速器组合，实现无级变速，变速范围大，调速精度高，可在运动中进行调速。

本机可广泛应用于食品、陶瓷、包装、化工、制药以及各种须调速的自动线、输送线、装配流水线上实现大件速比动力传动及控制。

UDL series planet cone-disk stepless speed variator merges domestic and overseas advanced technique and craftsmanship. It chooses high-grade material through high percision machining The die-casting housing havsing is made of high quality aluminium alloy allay.It has merits such as beautiful appearance,small volume,light weight,hight transmission eficiency.quick heat dissipation,low noise,flexible installation,convenient use,long lift,etc.

UDL series planet cone-disk stepless speed variator can be combined with various speed reducers to fulfill stepless speed varition,large speed-change scope,hight speed regulative precision.The speed could be adjusted during operation.

It is widely applicable in food,ceramics,packing,chemicals,pharmacy and various automatic production lines.

结构特点 / STRUCTURE FEATURES

1.调速精度高，速度重复精度达0.5-1转。
2.可双向连续运转。
3.输出传动比在1:1.4至1:7之间（UDL0.18除外）连续可调，变速比达5.
4.运行效率高，平稳静噪。
5.密封性好，对使用环境适应性强。
6.能与各种减速机灵活结合，解决各种传动变速方案。

1.High precision for the speed adjustment,the iterative precision of the speed is between 0.5-1 cycle.
2.Can run bi-directional continuously.
3.The output transmission ratio is between 1:1.4 and 1:7(except UDL0.18) can be adjusted.
4.High operating difficiency,stable and no noise.
5.Good sealing,and good adaptability in the operating environment.
6.Can combine with all kinds of reducers agilely to handle various.transmission projects.

结构特点 / STRUCTURE FEATURES

1.外壳：UDL为铝合金，UDT为铸铁；
2.内部零件：为热处理淬硬得GCr15钢；
3.轴：热处理淬硬并经低温回火得20Cr钢。

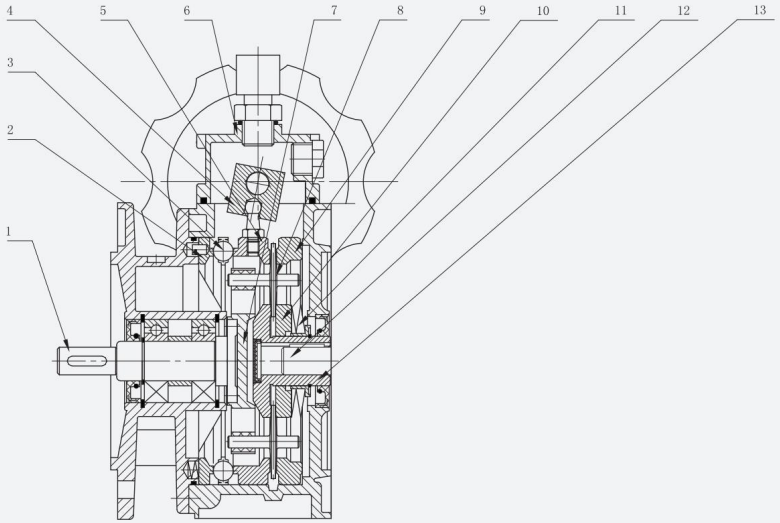
1.Outside shell:Aluminum alloy for UDL and casting iron for UDT.
2.Inner parts:GCr15 steel heat hardening.
3.Shaft 20Cr with heat treatment and low tempering

型号及标记 / Mood & mark

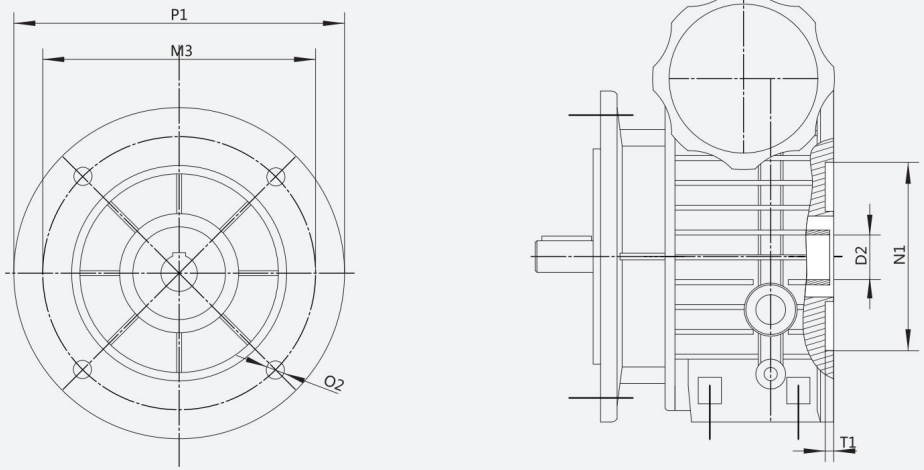
UD L 0.37-B5

0.37 配用电机功率	Relevant motor power	UD 行星锥盘无级变速器代号	Code of planetary cone stepless variator
B5 安装方位代号	Installation position code	L 铝合金机壳	Aluminium alloy casing

1.输出轴 Output shaft
2.调整轨 Regulating orbit
3.钢球环 Ball ring
4.滑块 Side block
5.活动外轨 Moving outer orbit
6.操作盒 operating box
7.行星架 Planet carrier
8.行星轮 Planet wheel
9.固定外轨 Fixed out orbit
10.活动内轨 Moving inner orbit
11.碟形弹簧 Butterfly spring
12.电机轴 Electric motor shaft
13.固定内轨 Fixed inner orbit

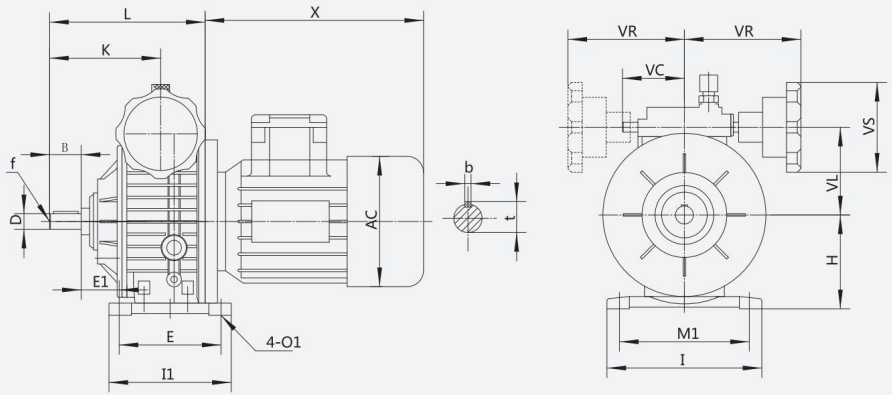


变速机的电机配合接口 / ADAPTATION INTERFACE



TYPE	PAM-IEC	P1	N1(H8)	M3	O2	D2(F7)	T1
UDL0.18	63B5	140	95	115	M8	11	5
UDL0.25-0.37	71B5	160	110	130	M8	14	5
UDT0.55-0.75	80B5	200	130	165	M10	19	6
UDT1.1-1.5	90B5	200	130	165	M10	24	6
UDT2.2-4.0	100/112B5	250	180	215	M12	28	6

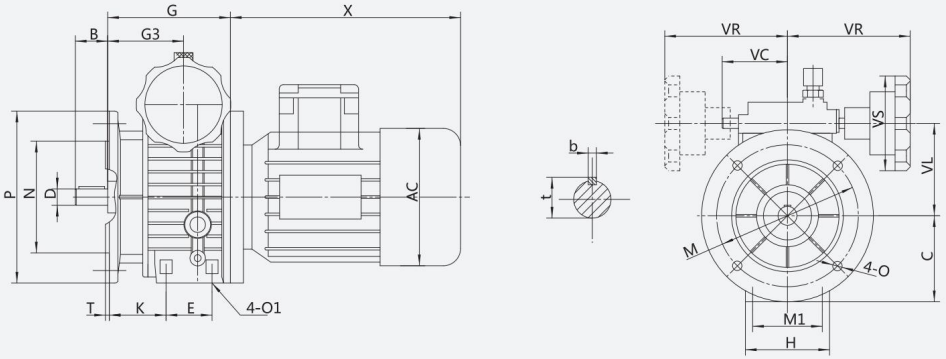
B3型外形尺寸 / B3 SIZE



B3型机座安装形式 / THE INSTALLATION FORM OF B3 TYPE FRAME

TYPE	B	D(j16)	E	E1	H	I	I1	K	L	M1	01	VC	VL	VR	VS	b	t
UDL0.18	23	11	105	17.5	80	145	120	87.5	135.5	110	9	71	78	110	85	4	12.5
UDL0.25-0.37	30	14	104	20	93	149	125	104	140	120	9	71	90	110	85	5	16
UDT0.55-0.75	40	19	125	26	113	190	150	125.5	179	160	11	79	107	120	110	6	21.5
UDT1.1-1.5	50	24	140	49	123	241	150	165	238	180	12	-	122	150	110	8	27
UDT2.2-4.0	60	28	230	25	150	300	270	191	268	245	14	-	150	160	110	8	31

B5型外形尺寸 / B5 SIZE



B5型机座安装形式 / THE INSTALLATION FORM OF B5 TYPE FRAME

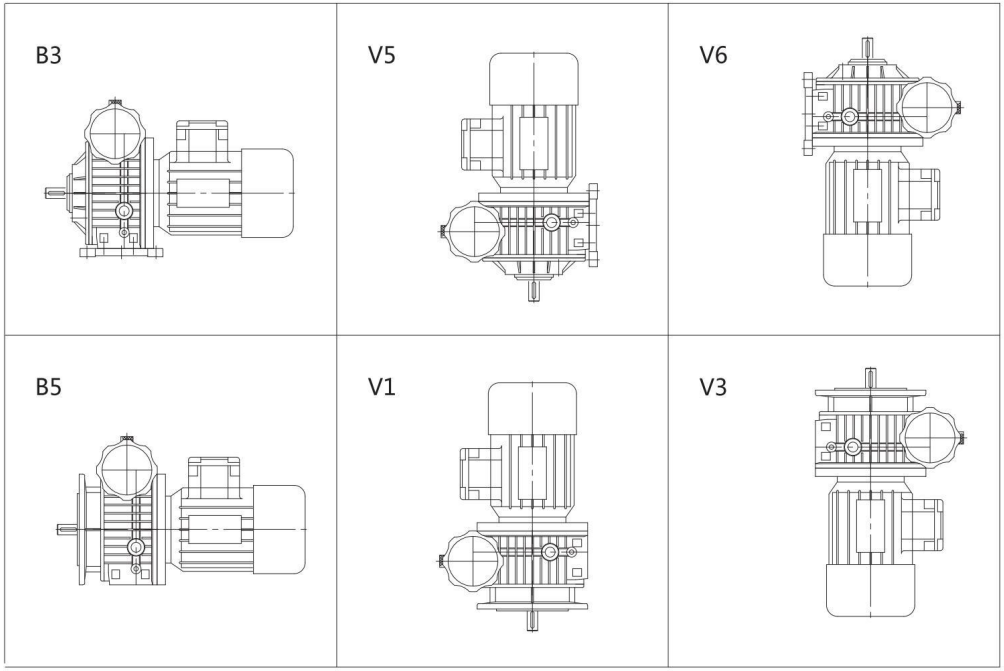
TYPE	B	C	D(j16)	E	G	G3	H	M	M1	O	O1	P	T	K	VC	VL	VR	b	t
UDL0.18	23	70	11	50	112.5	64.5	72	115	60	9	M6	140	3.5	46	71	78	110	4	12.5
UDL0.25–0.37	30	80	14	40	110	74	90	130	77	9	M8	160	3.5	53	71	90	110	5	16
UDT0.55–0.75	40	100	19	58	139	85.5	98	165	84	11	M8	200	3.5	60	79	107	120	6	21.5
UDT1.1–1.5	50	109	24	–	188	115	241	165	–	11	–	200	3.5	–	–	122	150	8	27
UDT2.2–4.0	60	130	28	–	208	131	270	215	–	15	–	250	4	–	–	150	160	8	31

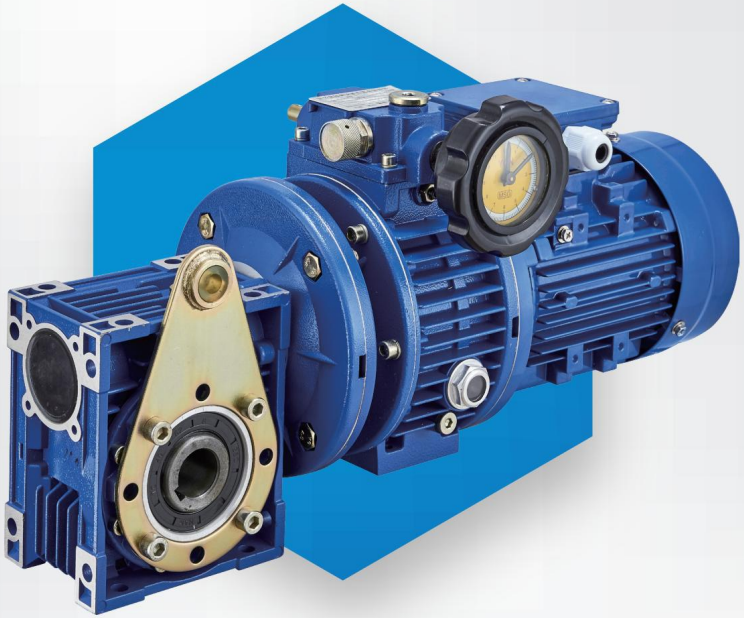
安装方位 / INSTALLATION POSITIONS DIAGRAM

UD系列无级变速机性能参数
Performance table for UD series speed variator (n1=1400r/min)

电机功率 / MOTOR POWER	型号 / model	I	n2(r/min)	M2(Nm)
0.18kW	UDL0.18	1.6–8.2	800–170	1.5–3
0.25kW	UDL0.37	1.4–7	1000–200	2.2–6
0.37kW	UDL0.37	1.4–7	1000–200	3–6
0.55kW	UDL0.75	1.4–7	1000–200	4–8
0.75kW	UDL0.75	1.4–7	1000–200	6–12
1.1kW	UDL1.5	1.4–7	1000–200	9–18
1.5kW	UDL1.5	1.4–7	1000–200	12–24
2.2kW	UDL2.2	1.4–7	1000–200	18–36
3.0kW	UDL2.2	1.4–7	1000–200	24–48
4.0kW	UDL2.2	1.4–7	1000–200	32–64

UD与NMRV安装方位 / UD AND NMRV INSTALLATION POSITION





NMRV+UDLTHE COMBINATION OF NMRV WORM GEAR REDUCER AND UDL STEPLESS SPEED CHANGER

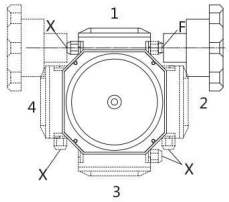
NMRV+UDL
蜗轮蜗杆减速机与无极变速组合

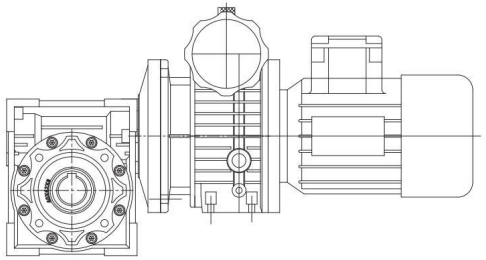
型号说明 / MODEL ILLUMINATE

NMRV	063	/	UD	L	037	/	50	/	E	/	FA1	/	DZ1	/	B3	/	0.37-4P	/	BMG	/	1	/	X
1	2		3	4	5		6		7		8		9		10		11		13		14		15

序号	说明	
1	蜗轮蜗杆减速机系列代号	Code for worm gear units series:
2	蜗轮蜗杆减速机中心距（规格）	Central distance of worm gear units(spec)
3	无级变速机系列代号	Code of stepless speed variator
4	1.L:铝合金机壳 2.T：铸铁机壳	1.L:Aluminium alloy housing 2.T:Cast iron casing
5	无极变速机座座号	Continuously variable transmisson model
6	减速机速度比（i=7.5，5，10，15,20,25,30,40,50,60,80,100）	Ratio of reducer (i=7.5,5,10,15,20,25,30,40,50,80,80,100)
7	1.无代号表示不带同向尾输出轴 2.E：带蜗杆同向尾输出轴	1.No mark means single extension worm shaft 2.E:Double extension worm shaft
8	1.无代号标识不带输出法兰 2.FA,FB,FC,FD,FE(1/2):输出法兰代号和位置	1.No mark means without single.excension worm shaft 2.FA FB FC FD FE(1/2)OUTPUT Flange and position
9	1.无代号表示孔输出 2.DZ（1/2）:单向输出轴和位置 3.SZ：双向输出轴	1.No mark means hole output 2.SS(1/2):Single output shaft and position 3.DS Double output shaft
10	安装方位代号	Installation position code
11	1.无代号标识不带电机 2.0.37-4P：电机功率、级数	1.No mark means without motor 2.037-4P.Model motors(poles of power)
12	1.无代号表示不带制动器 2.BMG：制动器	1.No mark means without brake 2.BMG:brake
13	电机接线盒位置，默认位置1可以不写	Position of motor terminal box default position 1 not to write out is ok
14	电机进线盒位置，默认位置X可以不写	Coil position for motor,default position x not to write out is ok

NMRV...UD...电机接线盒位置 / THE POSITION OF THE MOTOR TERMINAL BOX

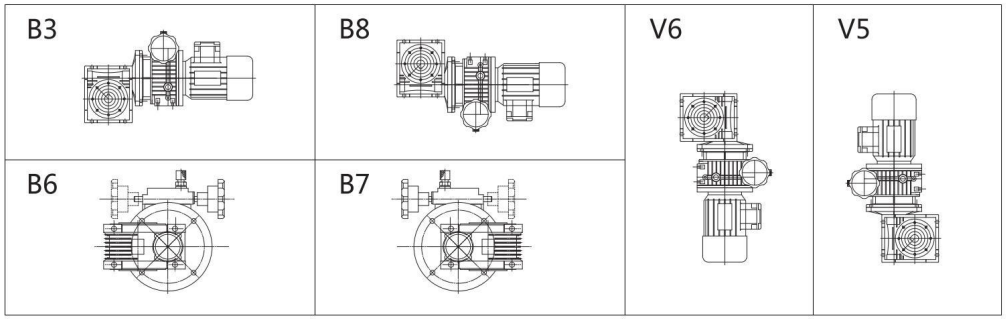




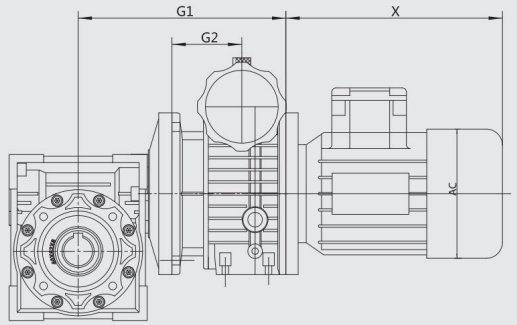
X:标准接线位置 normal position

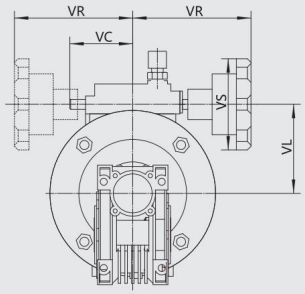
注：如对电机接线盒位置有特殊要求，订购时须参考上图得要求制定接线盒方位，否则接线盒方位将按安装方位图表中的方位提供。

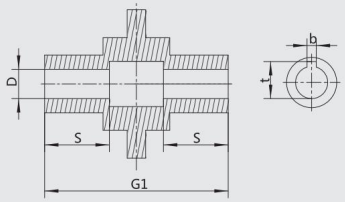
Note:If the motor terminal box position have special requirements,when ordering reference is made to the above requirements specialized terminal box position,or junction box range according to installation position chart position is provided.



NMRV+UD外形尺寸图表 / OUTLINE DIMENSION SHEET



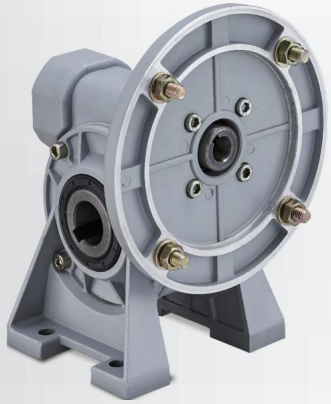




型号（model）	D(H8)	b	t	S	G1	G2	VL	VR	VR1
NMRV030-UDL63B5	14	5	16.3	21	167.5	119.5	78	110	110
NMRV040-UDL63B5	18(19)	6	20.8(21.8)	26	182.5	134.5	78	110	110
NMRV040-UDL71B5					180	144	90	110	110
NMRV050-UDL63B5	25(24)	8	28.3(27.3)	30	192.5	144.5	78	110	110
NMRV050-UDL71B5					190	154	90	110	110
NMRV063-UDL71B5	25(28)	8	28.3(31.3)	36	205	169	90	110	110
NMRV063-UDL80B5					234	180.5	107	120	120
NMRV075-UDL71B5	28(35)	8(10)	31.3(38.3)	40	222.5	186.5	90	110	110
NMRV075-UDL80B5					251.5	198	107	120	120
NMRV075-UDL90B5					300.5	227.5	122	150	–
NMRV090-UDL80B5	35(38)	10	38.3(41.3)	45	268.5	215	107	120	120
NMRV090-UDL90B5					317.5	244.5	122	150	–
NMRV110-UDL80B5	42	12	45.3	50	299	245.5	107	120	120
NMRV110-UDL90B5					348	275	122	150	–
NMRV110-UDL100/112B5					368	291	150	160	–
NMRV130-UDL90B5	45	14	48.3	60	368	295	122	150	–
NMRV130-UDL100/112B5					368	311	150	160	–

VF WORM GEAR REDUCER
VF蜗轮蜗杆减速机





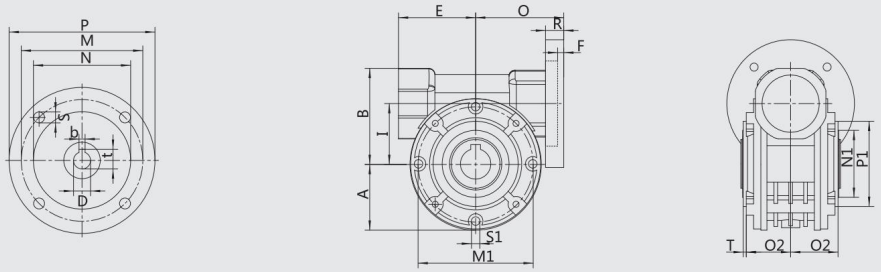
型号说明 / MODEL ILLUMINATE

VF	49	-	15	F	DZ	71B5	P
1	2		3	4	5	6	7

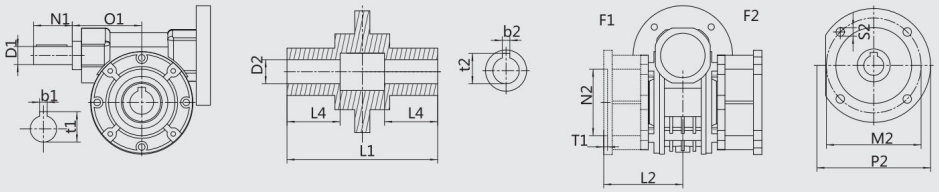
序号	说明	
1	减速器代号	Code of gear unit
2	蜗轮减速器中心距（规格）	The Center distance(model)
3	速比（7.5~100）	Ratio(7.5~100)
4	输出法兰	Output flange
5	DZ单向输出轴（SZ双向输出轴）	D2:single out put shaft(SZ:Double output shaft)
6	电机机座号	The frame of motor
7	无代号表示端盖安装 P为底脚安装	Pmeans foot-mounting, No mark meams cover-mounting

VF-P外形尺寸图 / VF-P OUTLINE DIMENSION SHEET

输入接口 / Input adapters



蜗杆输出轴 / Warm output shaft

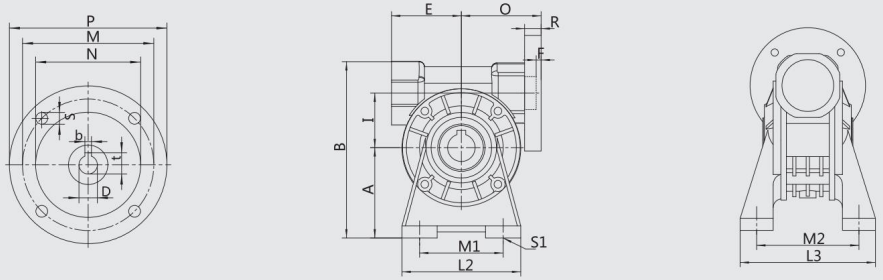


型号 / model	基座 / Base	D(E7)	b	t	P	M	N	R	S
030	56B5	9	3	10.4	120	100	80	7	7
	56B14	9	3	10.4	80	65	50	7	5.5
	63B5	11	4	12.8	140	115	95	8	9.5
	63B14	11	4	12.8	90	75	60	7	5.5
044	63B5	11	4	12.8	140	115	95	10	9.5
	63B14	11	4	12.8	90	75	60	8	5.5
	71B5	14	5	16.3	160	130	110	10	9.5
	71B14	14	5	16.3	105	85	70	10	7
049	63B5	11	4	12.8	140	115	95	10.5	9.5
	63B14	11	4	12.8	90	75	60	7	6
	71B5	14	5	16.3	160	130	110	10.5	9.5
	71B14	14	5	16.3	105	85	70	10.5	6.5
	80B5	19	6	21.8	200	165	130	10	11.5
	80B14	19	6	21.8	120	100	80	10	7

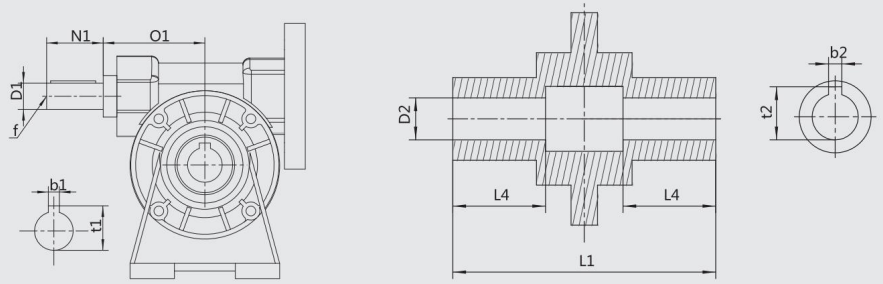
型号 / model	A	B	E	O	I	F	P1	M1	N2(n8)	T1	M2	N1(h8)	P2	O2	T	L1	L2	S1	S2	D1	D2(H7)	b1	t1	b2	t2	I2	01	N1	f
030	41	50	46	52	30	2	82	65	50	4	68	50	80	30	1.5	55	50.5	20.5	M6X7	6.5	9	14	3	10.2	5	16.3	50	20	–
044	51	71	54	65	44.6	2	80	65	60	7	87	50	110	35	2	64	60.5(90)	24.5	M6X8	8.5	11	18	4	12.5	6	20.8	56	30	–
049	56	80	63	70	49.5	3	108	94	70	10	90	68	125	36.5	2.5	82	85.5(115)	22.5	M6X9	11	16	25	5	18.3	8	28.3	65	40	M6X16

VF-A外形尺寸图 / VF-A OUT LINE DIMENSION SHEET

输入接口 / Input adapters



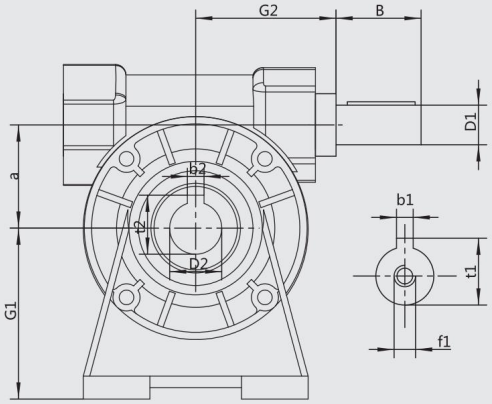
输入接口 / Input adapters



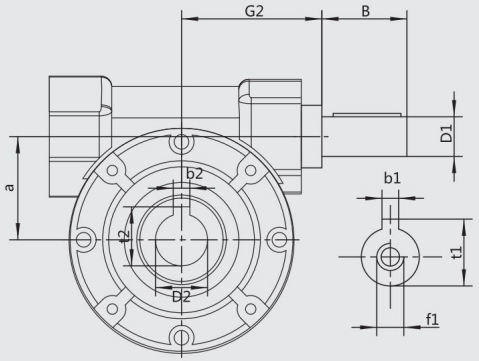
型号 / model	基座 / Base	D(E7)	b	t	P	M	N	R	S
030	56B5	9	3	10.4	120	100	80	7	7
	56B14	9	3	10.4	80	65	50	7	5.5
	63B5	11	4	12.8	140	115	95	8	9.5
	63B14	11	4	12.8	90	75	60	7	5.5
044	63B5	11	4	12.8	140	115	95	10	9.5
	63B14	11	4	12.8	90	75	60	8	5.5
	71B5	14	5	16.3	160	130	110	10	9.5
	71B14	14	5	16.3	105	85	70	10	7
049	63B5	11	4	12.8	140	115	95	10.5	9.5
	63B14	11	4	12.8	90	75	60	7	6
	71B5	14	5	16.3	160	130	110	10.5	9.5
	71B14	14	5	16.3	105	85	70	10.5	6.5
	80B5	19	6	21.8	200	165	130	10	11.5
	80B14	19	6	21.8	120	100	80	10	7

型号 / model	A	B	E	O	I	F	M1	M2	L1	L2	L3	L4	S1	D1	D2(H7)	b1	t1	b2	t2	O1	N1	f
030	72	143	46	52	30	2	52	81	55	90	98	20.5	8.5	9	14	3	10.2	5	16.3	50	20	–
044	72	143	54	65	44.6	2	52	81	64	90	98	24.5	8.5	11	18	4	12.5	6	20.8	56	30	–
049	82	162	63	70	49.5	3	63	98.5	82	110	124	22.5	8.5	16	25	5	18.3	8	28.3	65	40	M6X16

NVF外形尺寸图 / NVF OUTLINE DIMENSION SHEET



NVF-P



型号 / model	a	D1(h6)	t1	d1	D2(H7)	t2	d2	B	G2	G1	f1
030	30	9	10.2	3	14	16.3	5	20	50	47	–
044	44.6	11	12.5	4	18	20.8	6	30	54	55	–
049	49.5	16	18.3	5	25	28.3	8	40	65	64.5	M6X16

安装使用与保养 / INSTALLATION USAGE &MAINTENANCE

UD系统安装使用与保养 / UD installation usage & maintenance

(1) 轴伸形式全部为圆柱形，按《圆形柱轴伸》GB1569-1990选定，键联接按《普通平键》GB1095-2003选定。

(2)联轴器与电动机连接时应使轴线保持同心，安装误差不应大于所用联轴器的允许误差值。

(3)输出轴装联轴带轮时，用轴端螺孔压入，或加热装备，严禁捶打！

(4)机械无级变速机不宜用于可能超负荷或堵转适用场合。

(5)调速应在运转进行，严禁停车转动调速手轮！

(6)操作盒下的两端调速限位螺钉已调整好，请勿在动！

(7)本机不宜工作在高于40°的环境中，温升不得高于45°。关于本机的温升请看下面的介绍：

变速机采用四级电机时，此时部件在跑合（空车运转）开始，温度高于正常工作的环境温度约为40-50℃。

跑合60-80小时后，温升逐渐下降，此后 温度高于环境温度20℃，并保持稳定的温升，跑合时高的温升影响正常允许的工作条件，但对部件的使用寿命并无有害影响。

(8)变速机采用润滑油油浴润滑。润滑油牌号为Ub-3X，使用前请检查油位。

(9)出厂前润滑油已加入，首次使用1000小时后应更换润滑油，以后每隔5000小时换一次油。

(10)变速机内润滑油应保持在油标的三分之二高度，用户应经常检查油位高度，严禁在润滑不良的情况下使用。

操作盒上的透气螺母出厂时为防止搬运中漏油已旋紧，运转时需松开，严禁未松开使用！

(1)The shapes of shaft extension are all cylindrical.It is subject to GB 1569−1990 Cylindrical shaft extension.The key joint refers to GB 1095−2003 Ordinary flat key.

(2)The shaft lines should be kept concentric when the coupling is connectde with a motor.The installation error should be no more than the tolerance value of coupling.

(3) When the output shaft is installed with the coupling or belt wheel,they should ba pressed into the screw hole on shaft end.Or assembled by heating.No hammering on it!

(4)The mechanical stepless variator is not used in such an occasion wheel overload or running−blockage happen to occur.

(5)Speed−regulation should be effected in running.Do nou turn the hand whel of speed−redulation when the machine stops!

(6)The limit screws of speed−regulation on two ends under the operating box are well adjusted,Please don’t touch them!

(7)This set is not suited to work in the environment over 40℃,especially no more than 45℃ when the temperature rises.In regared to its temperature rise.In regard to its temperature rise plesae read the explanation as follows:

If a 4−pole motor is used for the speed variator,the temperature under running −in(empty running)is 40−50℃ higher than that of normal working environmengt.After running−in up to 60−80hours,the temperature rise will go down gradually.From that time on it is 20℃ higher than of environ−ment,and the temperature will keep on rising stably.The high temperature rise in running will affect normal permis−sive working conditin,but it won’t bring any bad effects to the service life of parts.

(8)The liquid lubricating oil is used for the speed variator.Its trade mark is Ub−3X.Please check up the oil level before use.

(9)The machine is filled with lubricating oil before leaving factory.When it starts to work up to 2000 hours for the first time,its lubricating oil should be raolaced,changing the lubricating oil every 5000 hours later.

(10)The lubrcating oil level inside the speed variator should be kept at the height of two−third in the oil scale .Users should usually check the height of oillevel.It is strictly prohibited to operate it when short of lubricating oil.The air screw nut on the operating box is screwed up for preventing from oil leakage in moving before leaving factory.It should be loosed when it starts to run.It is strictly forbidden to use it before loosing!

使用须知 / INSTRUCTION

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。

(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)NMRV025、030、040、050、063、075、090规格的减速机在出厂时已加注了润滑油，可以按照样本中安装方位所提到的方位安装。V5或V6安装时，请与我们技术服务人员联系。

(4)减速机NMRV110、130和150规格在出厂时已加注了矿物润滑油。

(5)无级变速机在出厂时也加注了矿物润滑油（广研Ub-3x）。

(6)减速机NMRV110、130和150规格的安装方位在下单时要说明，否则润滑油理按B3方位提供。

(7)NMRV系列的减速机，在特定的工作环境，需配排气阀（可选配件）。

(8)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。

(9)每工作3000工作小时，最低程度半年，应检测油以及油位，油封密封不严引起的滴漏的常规检测，若是IEC输入的减速机。则检测检查弹性体，必要时进行更换。

(10)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。

(11)根据不同的工作条件而定，更换输出轴上的油封。

(12)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 In the case of temperature−30℃ or over 60℃. it is necessary to use oil seals with special material

2 For operating range with temperature under 0℃.It is necessary to consider to consider the following.

- The motors need to be suitable for operation at the envisaged ambient temperature.
- The power of the electeic motor needs to be adequate for exceeding the higher starting torques required.
- In the case of reduction units with a cast−iron case,pay attention to impact loads since cast iron may have problems of fragility at temperatures under−15℃.
- During the early stages of service,problems of lubrication may arise due to the high level of viscosity taken on by the oil and so it is wise to have a faw minutes of rotation under no load.The oil needs to be changed after approximately 10000 hours.This period depends on the type of service and the environment where the reduction unit works.

3 The reduction units size NMRV025、030、040、050、063、075、090 are supplied complete with lubricant,and can therefore be mounted in any position envisaged in the catalogue.V5/V6 for which you should call ourTechnical Service to assess the condition of use.

4 The reduction units size 110、130 and 150 are supplied complete with lubricant,mineral oil.

5 The variator speed are supplied complete with lubricant ,mineral oil(GUANGYAN Ub−3x)

6 For sizes 110、130 and 150 it is necessary to specify the position,otherwise the reduction units are supplied with the quantity of oil relating to pos.B3.

7 NMRV series worm geabox should mount breather plug(optional parts) under special working condition.

8 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.

9 Every 3000 working time,at least every 6 months,you have to check the oil and oil level,the seals visually for leakage.For IEC input gear units,the elastomer should be tested or replaced if necessary.

10 Depending on the operating conditions(see chart below).every 3 years at the latest for inspection is needed.Then change the mineral oil and replace the bearing grease.

11 Depending on the operating conditions,change the oil seals on output shaft.

12 Once the malfunctions appear,stop disassembling the parts,and firstly please contact the customer service (the information about specification,de−licery date,series number,time used,name of machine,machine manufacturer,malfunction problem is required), then take the reasonable measures.