



常州市光卓传动设备有限公司  
Changzhou Guangzhuo Transmission Equipment Co., LTD

## ▶▶ 光卓减速机



# NMRV蜗轮蜗杆减速机



**传动装置专业制造商**

Professional manufacturer of transmission device

# DIRECTORY

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## 公司简介 COMPANY PROFILE

常州市光卓传动设备有限公司是一家集科研、生产、销售与一体的动力传动装置的专业制造商，对于生存制造公司秉承以质量求生存的理念，引进先进的检测设备和手段，致力于开发生产高效、节能、环保型传动产品。

公司自主设计开发各种类型的减速机、齿轮、三相异步单机。产品性能指标严格按照国家标准和行业标准制造，并建立了整套严格的、科学质量保证体系。严格按照 ISO9001-2000 国际质量管理体系标准运作，产品获 3C 国家强制性产品认证。出口按 CE 安全质量生产。产品拥有广泛的应用领域和竞争优势，一如既往的努力争做行业的佼佼者。

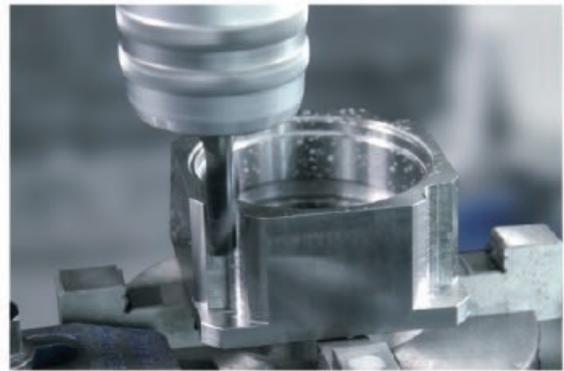
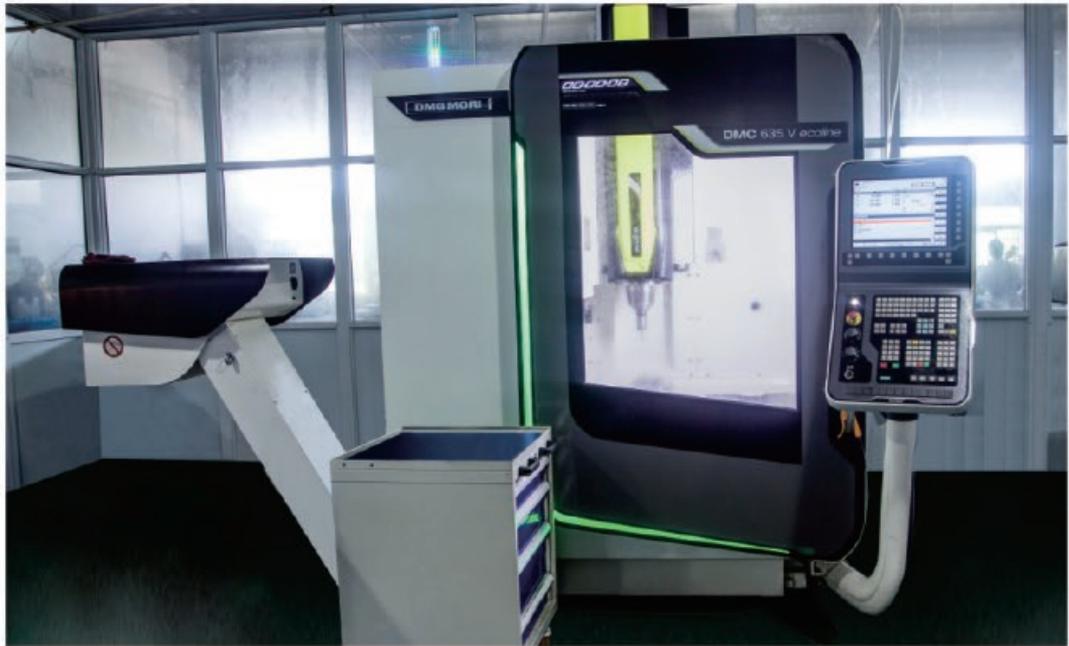
对于销售公司始终坚持着以客户至上的理念，为广大客户提供优质的产品和服务。对于客户我们提供更加优质、及时、便捷的服务 --- 真诚合作、共同发展。





整齐干净 规范作业  
您的设备在这里生产





# WORKSHOP

## 生产车间

每一道工序,要求精益求精。  
Perfection in Every Little Step & Process.

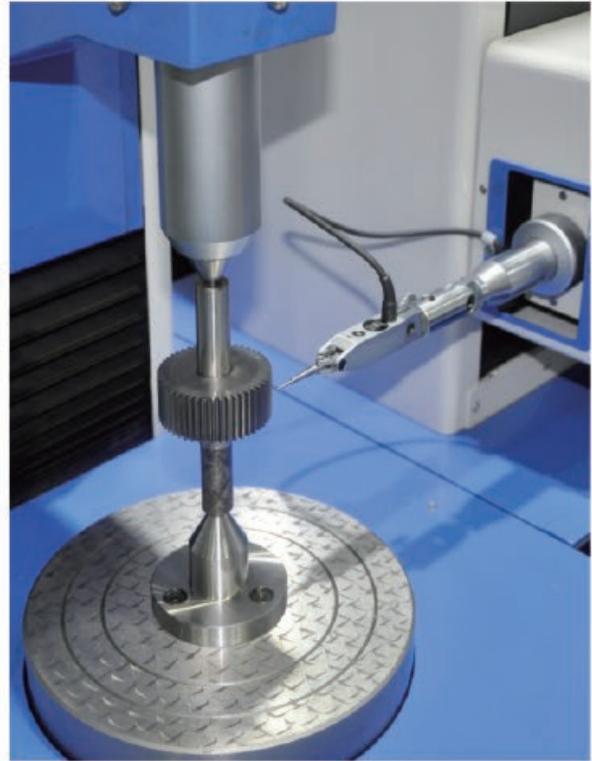




# TEST CENTER

## 检测中心

每一件产品, 皆是用心之作。  
Each Product is Manufactured by Heart.





# NMRV SERIES

NMRV系列

应用领域: 自动流水线



## 产品概述 / PRODUCTS OVERVIEW

### 产品特点

NMRV系列蜗轮蜗杆减速机具有以下一些主要特点：

1. 优质铝合金铸造，重量轻，不生锈；
2. 输出扭矩大；
3. 传动平稳，噪音小，适合在恶劣环境中长期连续工作；
4. 散热效率高；
5. 美观耐用，体积小；
6. 可适应全方位安装。

### 主要材料

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56 - 62HRC，精磨后保持渗碳层厚度0.3 - 0.5mm；
3. 蜗轮：耐磨锡青铜。

### 表面涂装

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、二甲苯等有机溶剂的腐蚀；
2. 磷化处理后，再喷RAL5010蓝色或银白色涂料。

铸铁外壳：先涂红色防锈漆，后喷涂RAL5010蓝色涂料。

### PRODUCTS CHARACTERISTICS

NMRV series worm gear units is a new-generation of product developed by our company on the basis of perfecting WJ series products with a compromise of advanced technology both at home and abroad. Its main features are as follows:

1. Made of high-quality aluminum alloy, light weight and non-rusting.
2. Large output torque.
3. Smooth in running and low in noise, can work long time in dreadful conditions.
4. High in radiating efficiency.
5. Good-looking in appearance, durable in service life and small in volume.
6. Suitable for omnibearing installation.

### MAIN MATERIALS

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 56-62HRC,retain carburation layer's thickness between 0.3 and 0.5mm after precise grinding.
3. Worm wheel: wearable stannum bronze alloy.

### SURFACE PAINTING

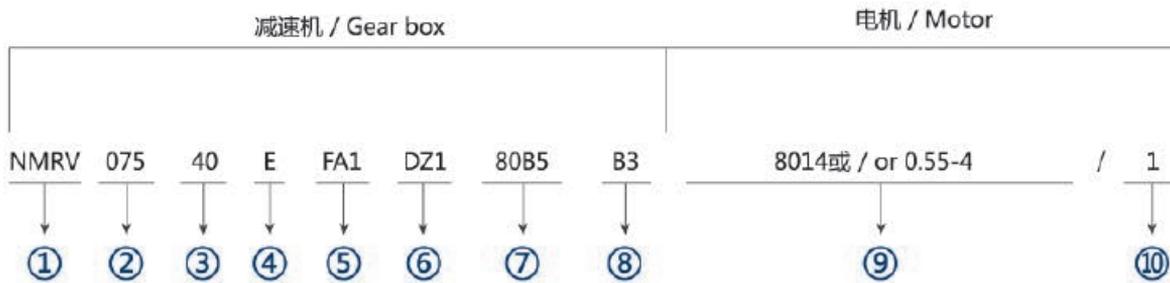
Aluminum alloy housing:

1. Shot blasting and special antiseptic treat-ment on the aluminum alloy surface.
2. After phosphating, paint with RAL5010 blue or silvery white paint.

Cast iron housing: First paint with red antirust paint, then paint white RAL5010 blue or silvery white paint.

## 型号说明 / MODEL ILLUMINATE

NMRV/NRV 蜗轮蜗杆减速电机与减速机  
WORM GEARED MOTOS AND WORM GEAR UNITS



NO	说明	Comments
1	型号代码： 1. RV孔输入带输入法兰 2. NRV轴输入不带输入法兰	Model code 1. RV:Hole input with flange 2. NRV:Shaft input without flange
2	蜗轮蜗杆减速机中心距（规格）	Central distance of worm gear units(spec)
3	减速机速比 ( i = 5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100 )	Speed ratio of reducer r(i = 5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100)
4	1. 无代号表示不带蜗杆同向尾出轴 2. E：带蜗杆同向尾出轴	1. No mark means single extension worm shaft 2. E: Double extension worm shaft
5	1. 无代号表示不带输出法兰 2. FA, FB, FC, FD, FE(1/2): 输出法兰号和位置	1. No mark means without output flange 2. FA, FB, FC, FD, FE(1/2): output Flange and position
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	1. No mark means hole output 2. DZ(1/2):Single output shaft and position 3. SZ:Double output shaft
7	输入法兰规格型式（不带电机时）	Normalized from of input flange(without motor)
8	安装方位代号	Installation position code
9	1. 无代号表示不带电机 2. 电机型号或功率，极数	1. No mark means without motor 2. Model motors(poles of power)
10	电机接线盒位置，默认位置1可以不写	Position diagram for motor terminal box default position 1 not to write out is ok

## 选型相关参数 / RELEVANT PARAMETER

### 功率 P

$$P_1 = P_2 / \eta \text{ (kw)}$$

$$P_{1n} \geq P_1 \cdot fs \text{ (kw)}$$

P<sub>1</sub> 输入功率

P<sub>2</sub> 输出功率

P<sub>1n</sub> 输入电机额定功率

fs 使用系数

η 传动效率

在NMRV蜗轮蜗杆减速机选型表中，这个功率P<sub>1n</sub>是指在输入转速为n<sub>1</sub>并且对应的使用系数fs=1时，减速机的安全输入功率，单位kw。

传动效率η值是减速机经过足够长时间的跑合后计算得到的。跑合后在动转过程中，表面温度下降并最终稳定。需要特别强调的是样本中给定的额定转矩值M<sub>2n</sub>应该考虑到传动效率η的关系。

### Power P

$$P_1 = P_2 / \eta \text{ (kw)}$$

$$P_{1n} \geq P_1 \cdot fs \text{ (kw)}$$

P<sub>1</sub> Input power

P<sub>2</sub> Output power

P<sub>1n</sub> Rated input motor power

fs Service factor

η Transmission efficiency

The parameter can be found in the NMRV gear-box rating charts and represents the kw that can be safely transmitted to the gearbox, based on input speed n<sub>1</sub> and service factor fs=1.

Values of η are calculated for gearboxes after a sufficiently in operation reduces and finally stabilizes. It may be worth highlighting that values of rated torque M<sub>2n</sub> given in the catalogue take the transmission efficiency η into consideration.

### 转速 n

n<sub>1</sub> 减速机输入转速

n<sub>2</sub> 减速机输出转速

若是减速机外部传动装置驱动，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。

### ROTATION SPEED N

n<sub>1</sub> Gear units input speed

n<sub>2</sub> Gear units output speed

If driven by the external gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life.

### 传动比 i

$$i = n_1 / n_2$$

### TRANSMISSION RATIO I

$$i = n_1 / n_2$$

### 扭矩 M

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

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

M<sub>2</sub> 输出扭矩

M<sub>2n</sub> 额定输出扭矩

P<sub>1</sub> 输入功率

η 传动效率

fs 使用系数

### TORQUE M

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

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

M<sub>2</sub> Output torque

M<sub>2n</sub> Rated output torque

P<sub>1</sub> Input power

η Transmission efficiency

fs Service factor

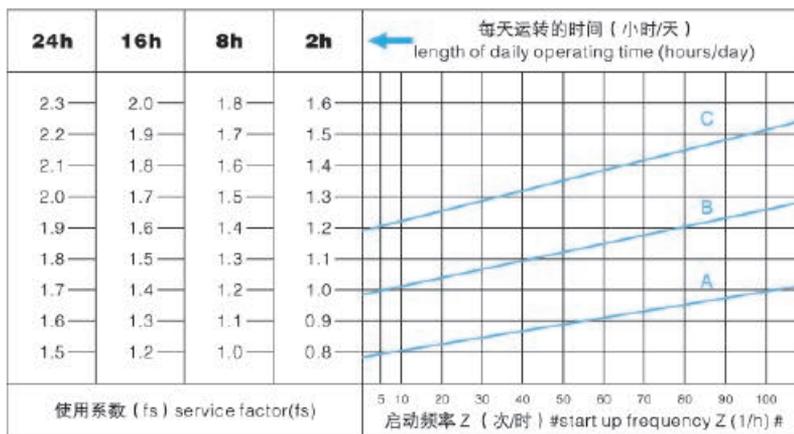
## 选型相关参数 / RELEVANT PARAMETER

### 使用系数 $f_s$

减速机上的从动机构的受驱动效果是用使用系数 $f_s$ 这个系数来衡量的。该使用系数根据每天的运转时间和启动频率 $Z$ 而定的。三种负载分类取决于惯性加速系数，在下图中可读取实际应用的使用系数，按这图表选取的使用系数必须小于或者等于性能参数表中提供的使用系数。

### SERVICE FACTOR $F_S$

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor  $f_s$ . 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, 制动的次数以及变速电机高低速变化时的次数。

Starting frequency  $Z$ : The cycles include all starting and braking procedures as well as change overs from low to high speed.

### 负载类型

负载性质:

A 均匀冲击负载, 允许惯性加速系数 $F_a \leq 0.3$

B 中等冲击负载, 允许惯性加速系数 $F_a \leq 3$

C 重冲击负载, 允许惯性加速系数 $F_a \leq 10$

### LOAD CLASSIFICATIONS

Type of load:

A Uniform, permitted mass acceleration factor  $F_a \leq 0.3$

B Moderate shock load, permitted mass acceleration factor  $F_a \leq 3$

C Heavy shock load, permitted mass acceleration factor  $F_a \leq 10$

负载类型:

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

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

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

Load Classifications:

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, compresses, folding machines, turntables, tumbling barrels, vibrators, shredders

## 选型相关参数 / RELEVANT PARAMETER

### 惯性加速系数

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<sup>2</sup>)

Jm 驱动电机的传动惯量 (kgm<sup>2</sup>)

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, 使用系数fs 仍须按以下调整:

1. 环境温度30~40℃: fs × ( 1.1~1.2 )
2. 环境温度40~50℃: fs × ( 1.3~1.4 )
3. 环境温度50~60℃: fs × ( 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使用系数fs应等于或略高于计算出的使用系数fs。

### MASS ACCELERATION FACTOR

The mass acceleration factor is calculated as follows :

$$Fa = Jc / Jm$$

Fa Mass acceleration factor

Jc All external mass moments of inertia (kgm<sup>2</sup>)

Jm Mass moment of inertia on the motor end (kgm<sup>2</sup>)

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 × ( 1.1~1.2 )
2. ambient temperature is 40~50℃: fs × ( 1.3~1.4 )
3. ambient temperature is 50~60℃: fs × ( 1.5~1.6 )
4. ambient temperature is > 60℃, please call our Technical Service.

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

### 径向载荷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的传动附加系数fz,列表如下:

### RADIAL LOADS FR

When determining the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered. Various 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 Gears	1.00	≥ 17齿 teeth
	1.15	< 17齿 teeth
链轮 Chain sprockets	1.00	≥ 20齿 teeth
	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

作用在轴上的径向载荷按如下公式计算:

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

Fr 作用在轴上的载荷 ( N )

M 作用在轴上的扭矩 ( Nm )

d<sub>o</sub> 安装在轴上传动件的平均直径 ( mm )

fz 传动附加系数

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

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

Fr Resulting radial load ( N )

M Torque on the shaft ( Nm )

d<sub>o</sub> Mean diameter of the mounted transmission element in (mm)

fz Transmission element factor

## 选型相关参数 / RELEVANT PARAMETER

当径向负荷不作用在轴中点时，按以下公式计算有效负荷：

$$F \times L \leq \frac{Fr_2 \cdot a}{(b+x)} \text{ (N)}$$

$Fr_2$  依据下面表格给出中底脚安装式齿轮减速器的许可径向载荷 ( $X=L/2$ ) (N)

$a, b$  齿轮减速器径向换算常量(mm)

$X$  轴户到实际作用点的距离(mm)

$a, b, Fr_2$  的数值在下面表格给出：

The allowed radial load force on the shaft is calculated with the following formula:

$$F \times L \leq \frac{Fr_2 \cdot a}{(b+x)} \text{ (N)}$$

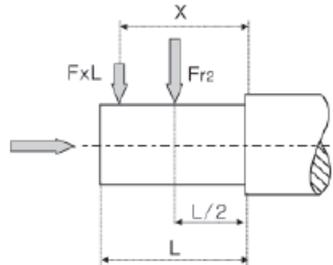
$Fr_2$  Permitted overhung load ( $x=L/2$ ) for foot-mounted gear units according to the selection tables in (N)

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

$X$  Distance from the shaft shoulder to the force application point in (mm)

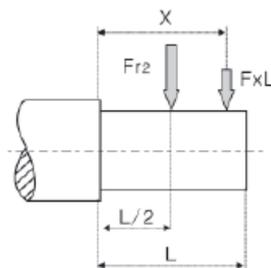
The values of  $a, b, Fr_2$  are given in the following tables:

### 输出轴径向载荷 / Out put shafts radial 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	76	95	101	122	136	148	174
$Fr_2$ max	1350	1830	3490	4840	6270	7380	8180	12000	13500	18000

### 输入轴径向载荷 / Input shafts radial 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	236	274	310
$Fr_2$ max	210	350	490	700	980	1270	1700	2100	2800

## 选型相关参数 / RELEVANT PARAMETER

### 选型表注释 / SELECTION TABLES COMMENTS

$P_{1n}$ (kw)	$n_2$ (r/min)	$i$	$M_{2n}$ (Nm)	$M_{2n}$ (Nm)	$f_s$		
$P_{1n}$	输入电机额定功率 (kw);			$P_{1n}$	Rated power driving motor (kw)		
$n_2$	输出转速(r/min);			$n_2$	Output speed (r/min)		
$M_{2n}$	额定输出扭矩(Nm);			$M_{2n}$	Rated output torque(Nm)		
$M_2 \max$	最大允许输出扭矩 (Nm);			$M_2 \max$	Permissible output torque(Nm)		
$i$	减速机速比;			$i$	Gear unit ratio		
$f_s$	使用系数;			$f_s$	Service factor		
	减速机型号;				Gear unit type		
	电机型号;				Motor type		

### 选型举例 / SELECTION EXAMPLE

#### 减速电机

例：被驱动设备所需功率0.5KW,  $n_1=1400r/min$ , 均匀冲击负载, 启动频率20次/小时, 24小时连续运行, 环境温度32℃, 输出转速 $n_2=93.3r/min$ , 减速电机要求B3安装方位, 则:

$$i = \frac{n_1}{n_2} = \frac{1400}{93.3} = 15$$

查P19页啮合参数表, 估算当 $i=15$ 时,  $\eta_d=0.82$   
查图调整使用系数得 $f_s=1.53 \times 1.12=1.714$   
 $P_{1n} \geq P_2 / \eta_d \cdot f_s = 0.5 / 0.82 \times 1.714 = 1.045(kw)$   
查NMRV系列性能参数表可确定减速电机型号为:  
NMRV075-15-B3-1.1-4  
输出扭矩 $M_2$ 计算:

$$M_2 = \frac{9550 \cdot P_2}{n_2} = \frac{9550 \cdot 0.5}{93.3} = 51.18(Nm)$$

$$M_{2n} = 95 \geq M_2 \cdot f_s = 51.18 \times 1.714 = 87.72(Nm)$$

#### GEAR MOTOR

Example:The input power of driver machine is 0.5kw,  $n_1=1400r/min$ , uniform, start up frequency 20(1/h),continuous running for 24 hours, the ambient temperature is 32℃, $n_2=93.3r/min$ ,B3 mounted so:

$$i = \frac{n_1}{n_2} = \frac{1400}{93.3} = 15$$

Check mash table on P19, estimate when the  $i=15$ ,  $\eta_d=0.82$   
Check and adjust the service factor, will get  $f_s=1.53 \times 1.12=1.714$   
 $P_{1n} \geq P_2 / \eta_d \cdot f_s = 0.5 / 0.82 \times 1.714 = 1.045(kw)$   
Choose type:  
NMRV075-15-B3-1.1-4

$$M_2 = \frac{9550 \cdot P_2}{n_2} = \frac{9550 \cdot 0.5}{93.3} = 51.18(Nm)$$

$$M_{2n} = 95 \geq M_2 \cdot f_s = 51.18 \times 1.714 = 87.72(Nm)$$

#### 减速机

例：被驱动设备所需扭矩为300Nm, 工作8小时连续运行, 均匀冲击负载, 启动频率5次/小时, 环境温度30℃, 即可选用系数 $f_s=1.2 \times 1.1=1.32$ , 减速机输入转速 $n_1=900r/min$ , 输出转速 $n_2=22.5r/min$ .

$$M_{2n} \geq M_2 \cdot f_s = 300 \times 1.32 = 396(Nm)$$

$$i = \frac{n_1}{n_2} = \frac{900}{22.5} = 40$$

查NMRV系列性能参数表可确定减速机型号为:  
NMRV090-40

#### GEAR UNITS

Example:Required torque 300um on driven machine, continuous running for 8 hours, uniform loda, the ambient temperature is 30℃, then choose the service factor  $f_s=1.2 \times 1.1=1.32$ ,  $n_1=900r/min$ ,  $n_2=22.5r/min$ .

$$M_{2n} \geq M_2 \cdot f_s = 300 \times 1.32 = 396(Nm)$$

$$i = \frac{n_1}{n_2} = \frac{900}{22.5} = 40$$

Choose type:  
NMRV090-40

## 选型相关参数 / RELEVANT PARAMETER

### 效率与自锁特性 / EFFICIENCY & IRREVERSIBILITY CHARACTER

效率是减速机一个重要参数，效率  $\eta$  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。在第21页上的啮合参数表列出了动态效率 ( $n_1 = 1400$ ) 及静态效率参数。请注意：这些参数是指减速机磨合后性能稳定的计算值。另外，样本中规定的扭矩  $M_{2n}$  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  $\eta$  depends on the following parameters: 1. helix angle of gearing; 2. driving speed; 3. running-in of gearing; 4. The performance of oil, oil seal and bearing. The mesh data table on page 21 shows dynamic efficiency ( $n_1 = 1400$ ) and static efficiency values. Remember that these values are only achieved after the unit has been run in. Torque values  $M_{2n}$  indicated in the catalogue are calculated by considering the steady-state performance of the gearboxes. The actual values mentioned above may have deflection.

#### 动态自锁

动态自锁是指当马达输入轴突然停止时，输出轴能同步停止。此条件要求动态效率  $\eta_d < 0.5$  (参见第21页表格)

#### DYNAMIC IRREVERSIBILITY

Dynamic irreversibility is achieved when the output shaft stops instantly when drive is no longer transmitted through the worm shaft. This condition requires a dynamic efficiency of  $\eta_d < 0.5$  (see table on page 21).

#### 静态自锁

静态自锁是指当减速器处于静止状态时，输出轴上的负载不能把蜗轮推动。此条件要求静态效率  $\eta_s < 0.5$  (参见第21页表格)

#### STATIC IRREVERSIBILITY

Static irreversibility is achieved when the gear reducer at a standstill, the application of a load to the output shaft can't drive the worm shaft. This condition requires a static efficiency of  $\eta_s < 0.5$  (see table on page 21).

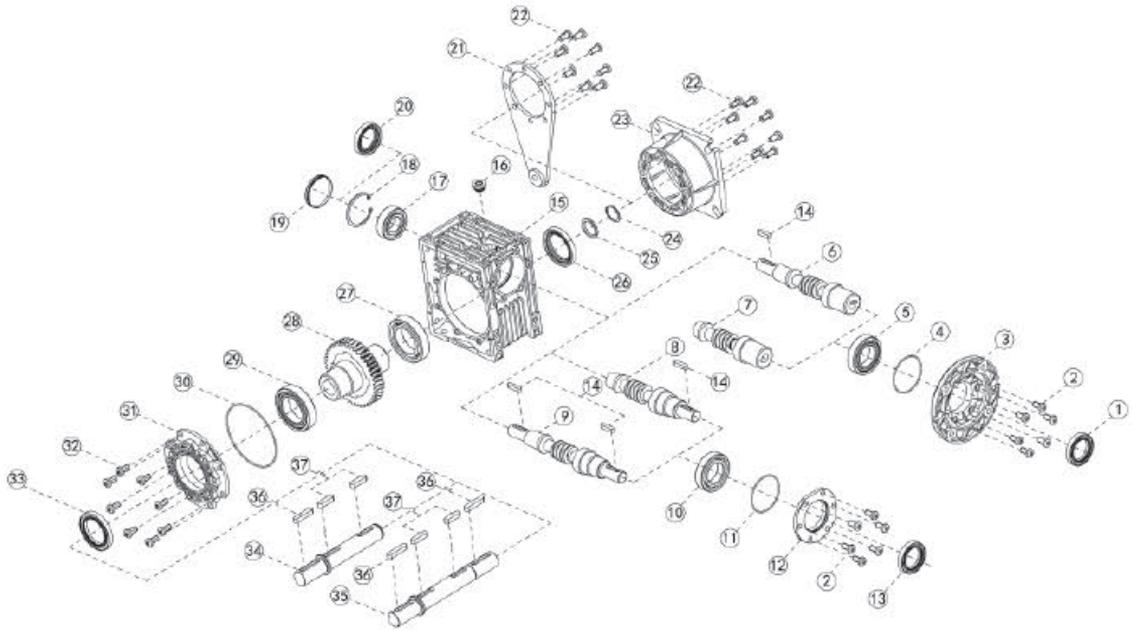
$\eta_d$	> 0.6	0.5~0.6	0.4~0.5	< 0.4
动态自锁效果	动态不自锁	动态自锁很低	动态自锁良好	动态自锁
Dynamic irreversibility	Dynamic reversibility	Low dynamic reversibility	Good dynamic irreversibility	Dynamic irreversibility

$\eta_s$	> 0.55	0.5~0.55	< 0.5
静态自锁效果	静态不自锁	静态自锁很低	静态自锁
Static irreversibility	Static reversibility	Low static reversibility	Static irreversibility

上述表格中所有参数只是供大概参考，振动和冲击也会影响减速机的自锁功能。事实上要保证完全自锁是不可能的，我们建议需要时安装外部的安全制动的装置。对于一个组合减速机自锁条件时，必须考虑单减速机的自锁功能效率，因为整体自锁功能是： $\eta_{tot} = \eta_1 \times \eta_2$ 。

The table shows approximate irreversibility classes. Vibrations and shocks can affect a gear reducer's irreversibility. As it is virtually impossible to provide and guarantee total non-reversing, we recommend the use of an external brake with sufficient capability to prevent vibrations in duced starting, where these circumstances are required. For the irreversibility conditions of a combined geared unit one must consider that the efficiency of the group is given by the product of the efficiencies of each single reducer:  $\eta_{tot} = \eta_1 \times \eta_2$ .

## NMRV结构分解图 / NMRV STRUCTURE DIAGRAM



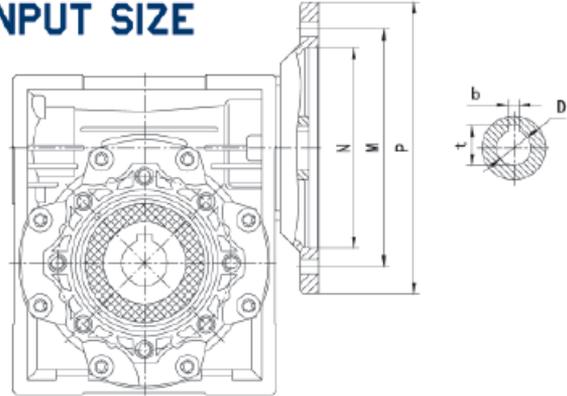
1 油封	11 O型橡胶密封圈	21 扭力臂	31 输出端盖
2 内六角圆柱头螺栓	12 轴承座	22 内六角圆柱头螺栓	32 内六角圆柱头螺栓
3 电机法兰	13 油封	23 输出法兰	33 油封
4 O型橡胶密封圈	14 平键	24 轴用弹性挡圈	34 单向输出轴
5 轴承	15 箱体	25 挡圈	35 双向输出轴
6 孔输入轴输入蜗杆	16 油塞	26 油封	36 平键
7 孔输入蜗杆	17 轴承	27 轴承	37 平键
8 轴输入蜗杆	18 孔用弹性挡圈	28 蜗轮	
9 双轴输入蜗杆	19 平面油封	29 轴承	
10 轴承	20 油封	30 O型橡胶密封圈	
1 Oil seal	11 O-ring	21 Torque arm	31 Bearing support cover
2 Hexgon socket head cap screw	12 Bearing block	22 Hexgon socket head cap screw	32 Hexgon socket head cap screw
3 Flange PAM	13 Oil seal	23 Output flange	33 Oil seal
4 O-ring	14 Parallel key	24 Circlip for shaft	34 Single output shaft
5 Bearing	15 Cablint	25 Washer	35 Double output shaft
6 Double ext. RV Worm	16 Plug cock	26 Oil seal	36 Parallel key
7 PAM worm	17 Bearing	27 Bearing	37 Parallel key
8 RV worm	18 Circlip for hole	28 Worm wheel	
9 Double ext. RV worm	19 Oil seal	29 Bearing	
10 Bearing	20 Oil seal	30 O-ring	

## 减速机啮合参数 / MESH DATA

NRV	i	6	7.5	10	15	20	25	30	40	50	60	80	100
025	Z1	6	4	3	2	2	—	1	1	1	1	—	—
	$\gamma$	30° 58'	21° 48'	16° 42'	11° 19'	10° 53'	—	5° 43'	5° 29'	4° 34'	3° 23'	—	—
	m	1.25	1.25	1.25	1.25	1	—	1.25	1	0.8	0.65	—	—
	$\eta_d(1400)$	0.87	0.85	0.83	0.79	0.75	—	0.67	0.62	0.58	0.55	—	—
	$\eta_s$	0.72	0.71	0.68	0.61	0.56	—	0.46	0.41	0.36	0.34	—	—
030	Z1	6	4	3	2	2	1	1	1	1	1	1	—
	$\gamma$	29° 03'	20° 19'	15° 31'	10° 29'	5° 42'	6° 10'	5° 17'	2° 52'	3° 26'	2° 52'	1° 58'	—
	m	1.5	1.5	1.5	1.5	1	1.75	1.5	1	0.9	0.75	0.55	—
	$\eta_d(1400)$	0.87	0.85	0.82	0.77	0.73	0.68	0.65	0.59	0.55	0.51	0.44	—
	$\eta_s$	0.72	0.67	0.63	0.55	0.5	0.43	0.39	0.35	0.31	0.27	0.23	—
040	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	30° 58'	21° 48'	16° 42'	11° 19'	11° 19'	8° 08'	5° 43'	5° 43'	4° 0.5'	2° 52'	2° 52'	2° 29'
	m	2	2	2	2	1.6	1.25	2	1.6	1.25	1	0.8	0.65
	$\eta_d(1400)$	0.89	0.87	0.85	0.82	0.78	0.75	0.7	0.65	0.62	0.58	0.52	0.47
	$\eta_s$	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	Z1	4	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	23° 49'	21° 48'	16° 42'	11° 19'	11° 19'	9° 05'	5° 43'	5° 43'	4° 21'	2° 52'	2° 52'	2° 17'
	m	3.4	2.5	2.5	2.5	2	1.6	2.5	2	1.6	1.25	1	0.8
	$\eta_d(1400)$	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
	$\eta_s$	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	Z1	—	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	—	24° 31'	18° 53'	12° 51'	11° 19'	8° 45'	6° 30'	5° 43'	4° 24'	3° 03'	2° 52'	2° 12'
	m	—	3.25	3.25	3.25	2.5	2	3.25	2.5	2	1.6	1.25	1
	$\eta_d(1400)$	—	0.88	0.87	0.83	0.81	0.78	0.74	0.7	0.66	0.62	0.57	0.51
	$\eta_s$	—	0.71	0.67	0.6	0.55	0.51	0.45	0.4	0.36	0.33	0.28	0.24
075	Z1	—	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	—	28° 4'	21° 48'	14° 56'	11° 19'	11° 19'	7° 36'	5° 43'	5° 43'	3° 49'	4° 21'	2° 52'
	m	—	4	4	4	3	2.5	4	3	2.5	2	1.6	1.25
	$\eta_d(1400)$	—	0.89	0.88	0.85	0.82	0.80	0.76	0.72	0.69	0.65	0.60	0.55
	$\eta_s$	—	0.71	0.68	0.61	0.57	0.53	0.46	0.42	0.38	0.35	0.29	0.26
090	Z1	—	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	—	28° 04'	26° 34'	18° 26'	14° 02'	11° 19'	9° 28'	7° 08'	5° 43'	4° 46'	3° 53'	2° 52'
	m	—	4.8	5	5	3.75	3	5	3.75	3	2.5	1.9	1.5
	$\eta_d(1400)$	—	0.9	0.89	0.86	0.84	0.82	0.78	0.75	0.72	0.69	0.63	0.59
	$\eta_s$	—	0.73	0.7	0.64	0.6	0.56	0.49	0.45	0.41	0.38	0.32	0.28
110	Z1	—	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	—	28° 46'	22° 22'	15° 21'	14° 20'	14° 02'	7° 49'	7° 17'	7° 08'	5° 48'	4° 54'	3° 37'
	m	—	5.9	5.9	5.9	4.6	3.75	5.9	4.6	3.75	3.15	2.4	1.9
	$\eta_d(1400)$	—	0.9	0.89	0.86	0.85	0.84	0.79	0.78	0.75	0.72	0.67	0.63
	$\eta_s$	—	0.72	0.69	0.63	0.62	0.59	0.48	0.48	0.44	0.41	0.36	0.32
130	Z1	—	4	3	2	2	2	1	1	1	1	1	1
	$\gamma$	—	29° 15'	22° 47'	15° 39'	13° 47'	12° 24'	7° 58'	7° 00'	6° 17'	6° 07'	3° 56'	3° 41'
	m	—	7	7	7	5.4	4.4	7	5.4	4.4	3.75	2.75	2.25
	$\eta_d(1400)$	—	0.91	0.89	0.87	0.86	0.84	0.8	0.78	0.75	0.72	0.68	0.64
	$\eta_s$	—	0.72	0.69	0.63	0.61	0.58	0.49	0.46	0.43	0.39	0.34	0.3
150	Z1	—	6	4	3	2	2	2	1	1	1	1	1
	$\gamma$	—	29° 37'	24° 41'	15° 52'	12° 56'	11° 19'	9° 56'	6° 34'	5° 43'	5° 00'	3° 45'	2° 52'
	m	—	5.4	6.16	5.4	6.16	5	4.2	6.16	5	4.2	3.15	2.5
	$\eta_d(1400)$	—	0.91	0.9	0.88	0.86	0.84	0.83	0.78	0.76	0.73	0.68	0.64
	$\eta_s$	—	0.73	0.71	0.66	0.6	0.57	0.54	0.45	0.42	0.39	0.33	0.29

备注: i-速比, Z1-蜗杆头数;  $\gamma$ -导程角, m-模数,  $\eta_d$ -动态效率,  $\eta_s$ -静态效率。

## 减速机输入尺寸 / NMRV REDUCER INPUT SIZE



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

# NMRV

传动装置专业制造商

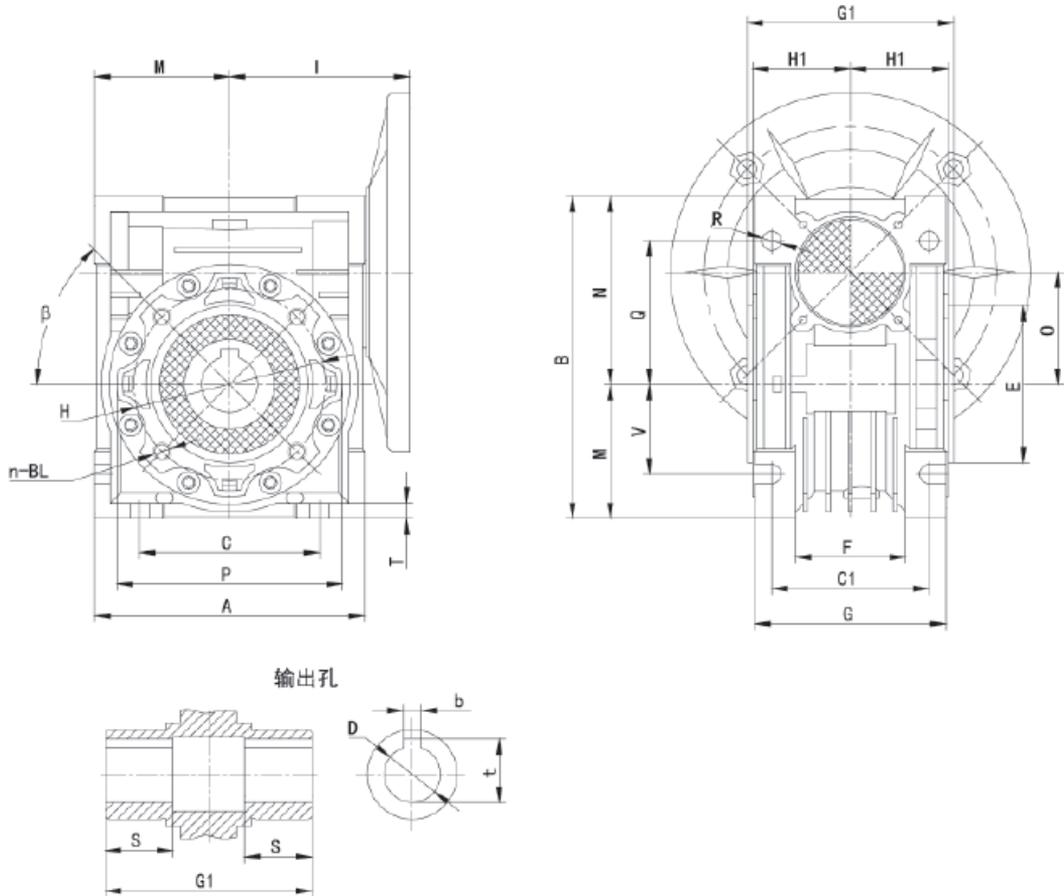
PROFESSIONAL MANUFACTURER OF TRANSMISSION DEVICE

系列

## RV产品介绍 / RV PRODUCT INTRODUCTION



## RV尺寸/ RV SIZE

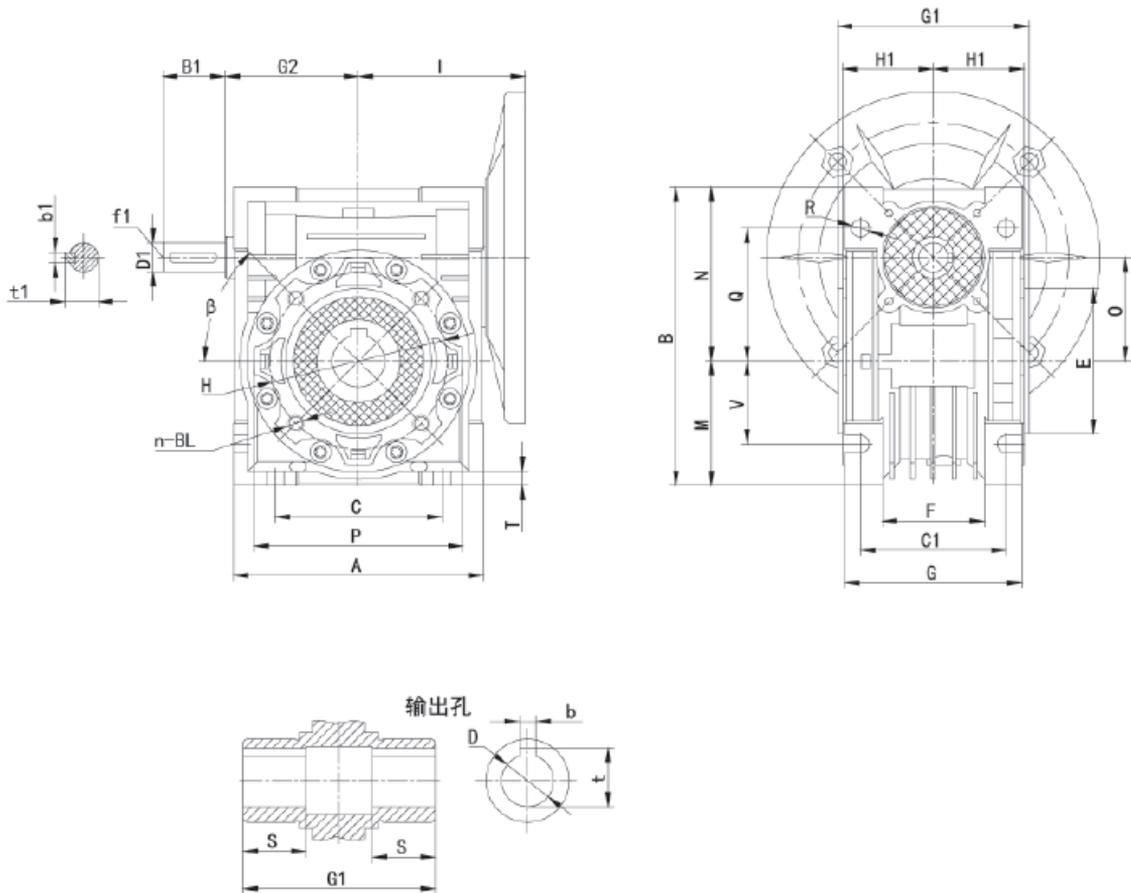


RV	A	B	C	C1	D (H8)	E (h8)	F	G	G1	H	H1	I	M	N	O	P	Q	R	S	T	BL	$\beta$	b	t	v
030	80	97	54	44	14	55	32	56	63	65	29	55	40	57	30	75	44	6.5	21	5.5	M6X10 (n=4)	0°	5	16.3	27
040	100	121.5	70	60	18 (19)	60	43	71	78	75	36.5	70	50	71.5	40	87	55	6.5	26	6.5	M6X10 (n=4)	45°	6	20.8 (21.8)	35
050	120	144	80	70	25 (24)	70	49	85	92	85	43.5	80	60	84	50	100	64	8.5	30	7	M8X12 (n=4)	45°	8	28.3 (27.3)	40
063	144	174	100	85	25 (28)	80	67	103	112	95	53	95	72	102	63	110	80	8.5	36	8	M8X12 (n=8)	45°	8	28.3 (31.3)	50
075	172	205	120	90	28 (35)	95	72	112	120	115	57	112.5	86	119	75	140	93	11	40	10	M8X14 (n=8)	45°	8 (10)	31.3 (38.3)	60
090	206	238	140	100	35 (38)	110	74	130	140	130	67	129.5	103	135	90	160	102	13	45	11	M10X16 (n=8)	45°	10	38.3 (41.3)	70
110	255	295	170	115	42	130	-	144	155	165	74	160	127.5	167.5	110	200	125	14	50	14	M10X18 (n=8)	45°	12	45.3	85
130	293	335	200	120	45	180	-	155	170	215	81	179	146.5	187.5	130	250	140	16	60	15	M12X20 (n=8)	45°	14	48.8	100
150	340	400	240	145	50	180	-	185	200	215	96	210	170	230	150	250	180	18	72.5	18	M12X22 (n=8)	45°	14	53.8	120

## RV-E产品介绍 / RV-E PRODUCT INTRODUCTION



## RV-E尺寸 / RV-E SIZE



RV-E	A	B	B1	C	C1	D (H8)	D1 (j6)	E (h8)	F	G	G1	G2	H	H1	I	M	N	O	P	Q	R	S	T	BL	$\beta$	b	b1	t	t1	f1	V
C30	80	97	20	54	44	14	9	55	32	56	63	45	65	29	55	40	57	30	75	44	6.5	21	5.5	M5X10 (n=4)	D°	5	3	16.3	10.2	-	27
O40	100	121.5	23	70	60	18 (19)	11	60	43	71	78	53	75	36.5	70	50	71.5	40	87	55	6.5	26	6.5	M6X10 (n=4)	45°	6	4	20.8 (21.8)	12.5	-	35
O60	120	144	30	80	70	25 (24)	14	70	49	85	92	64	85	43.5	80	60	84	50	100	64	8.5	30	7	MBX12 (n=4)	45°	8	5	28.3 (27.3)	16	M6	40
O63	144	174	40	100	85	25 (26)	19	80	67	103	112	75	95	53	95	72	102	63	110	80	8.5	36	8	MBX12 (n=8)	45°	8	6	28.3 (31.3)	21.5	M6	50
O75	172	205	50	120	90	28 (35)	24	95	72	112	120	90	115	57	112.5	86	119	75	140	93	11	40	10	MBX14 (n=8)	45°	8 (10)	8	31.3 (38.3)	27	M8	60
O90	206	238	50	140	100	35 (38)	24	110	74	130	140	108	130	67	129.5	103	135	90	160	102	13	45	11	M10X16 (n=8)	45°	10	8	38.3 (41.3)	27	M8	70
110	255	295	60	170	115	42	28	130	-	144	155	135	165	74	160	127.5	167.5	110	200	125	14	50	14	M10X18 (n=8)	45°	12	8	45.3	31	M10	85
130	293	335	80	200	120	45	30	160	-	155	170	155	215	81	179	146.5	187.5	130	250	140	16	60	15	M12X20 (n=8)	45°	14	8	48.8	33	M10	100
150	340	400	80	240	145	50	35	180	-	185	200	175	215	96	210	170	230	150	290	180	18	72.5	18	M12X22 (n=8)	45°	14	10	53.8	38	M12	120

# NMRV

传动装置专业制造商

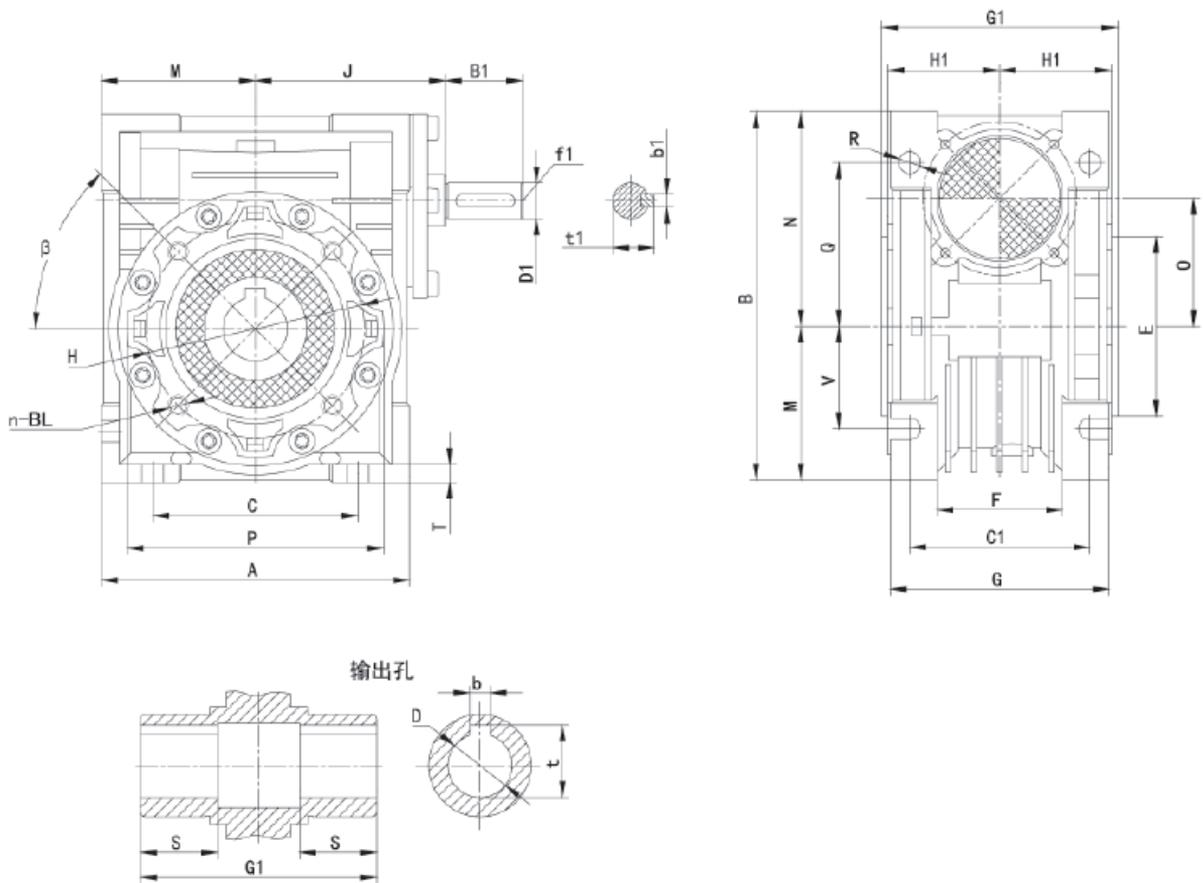
PROFESSIONAL MANUFACTURER OF TRANSMISSION DEVICE

系列

## NRV产品介绍 / NRV PRODUCT INTRODUCTION



## NRV尺寸 / NRV SIZE



NRV	A	B	B1	C	C1	D (H8)	D1 (H8)	E (h8)	F	G	G1	H	H1	J	M	N	O	P	Q	R	S	T	BL	β	b	b1	t	t1	f1	V
030	80	97	20	54	44	14	9	55	32	56	63	65	29	51	40	57	30	75	44	6.5	21	5.5	M6X10 (n=4)	0°	5	3	16.3	10.2	-	27
040	100	121.5	23	70	60	18 (19)	11	60	43	71	78	75	36.5	60	50	71.5	40	87	55	6.5	26	6.5	M6X10 (n=4)	45°	6	4	20.8 (21.8)	12.5	-	35
050	120	144	30	80	70	25 (24)	14	70	49	85	92	85	43.5	74	60	84	50	100	64	8.5	30	7	M8X12 (n=4)	45°	8	5	28.3 (27.3)	16	M6	40
063	144	174	40	100	85	25 (26)	19	80	67	103	112	95	53	90	72	102	63	110	80	8.5	36	8	M8X12 (n=8)	45°	8	6	28.3 (31.3)	21.5	M6	50
075	172	205	50	120	90	28 (35)	24	95	72	112	120	115	57	105	86	119	75	140	93	11	40	10	M8X14 (n=8)	45°	8 (10)	8	31.3 (38.3)	27	M8	60
090	206	238	60	140	100	35 (38)	24	110	74	130	140	130	67	125	103	135	90	160	102	13	45	11	M10X16 (n=8)	45°	10	8	38.3 (41.3)	27	M8	70
110	255	295	60	170	115	42	28	130	-	144	155	165	74	142	127.5	167.5	110	200	125	14	50	14	M10X18 (n=8)	45°	12	8	45.3	31	M10	85
130	293	335	80	200	120	45	30	180	-	155	170	215	81	162	146.5	187.5	130	250	140	16	60	15	M12X20 (n=8)	45°	14	8	48.8	33	M10	100
150	340	400	80	240	145	50	35	180	-	185	200	215	96	195	170	230	150	250	180	18	72.5	18	M12X22 (n=8)	45°	14	10	53.8	38	M12	120

# NMRV

传动装置专业制造商

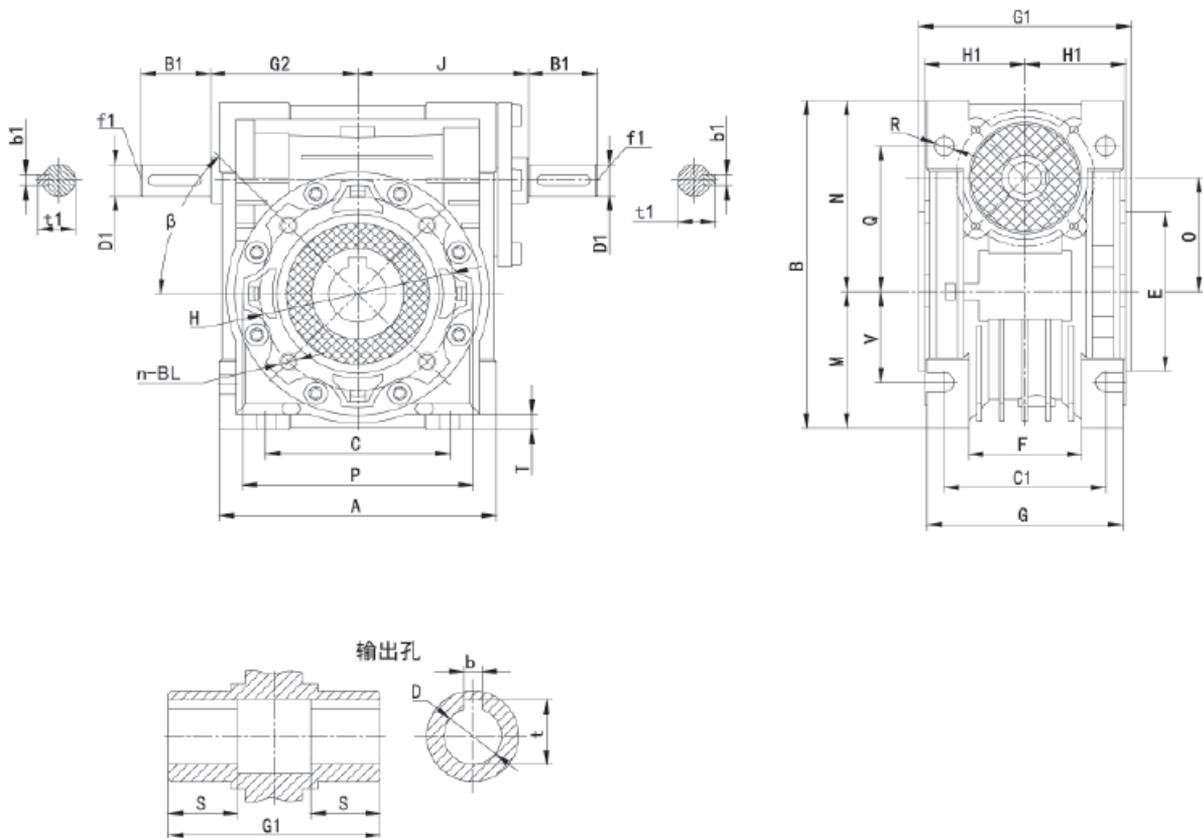
PROFESSIONAL MANUFACTURER OF TRANSMISSION DEVICE

系列

## NRV-E产品介绍 / NRV-EPRODUCT INTRODUCTION

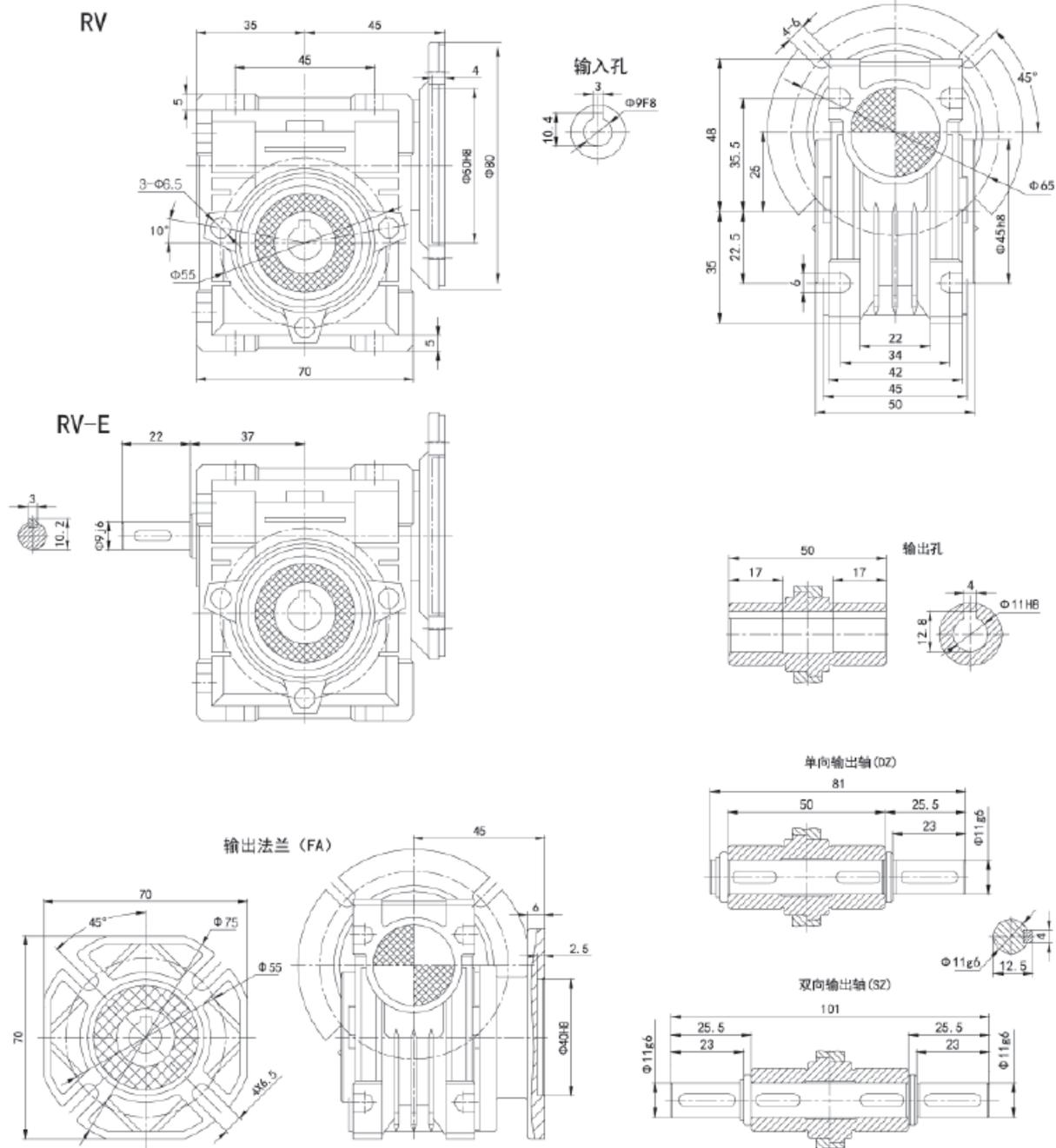


## NRV-E尺寸 / NRV-E SIZE



NRV-E	A	B	B1	C	C1	D (H8)	D1 (H8)	E (h8)	F	G	G1	G2	H	H1	J	M	N	O	P	Q	R	S	T	BL	$\beta$	b	b1	t	t1	f1	V
030	80	97	20	54	44	14	9	35	32	56	63	45	65	29	51	40	57	30	75	44	6.5	21	5.5	M5X10 (n=4)	D°	5	3	16.3	10.2	-	27
040	100	121.5	23	70	60	18(19)	11	60	43	71	78	53	75	36.5	60	50	71.5	40	87	55	6.5	26	6.5	M5X10 (n=4)	45°	6	4	20.8 (21.8)	12.5	-	35
050	120	144	30	80	70	25(24)	14	70	49	85	92	64	85	43.5	74	60	84	50	100	64	8.5	30	7	M6X12 (n=4)	45°	8	5	28.3 (27.3)	16	M6	40
063	144	174	40	100	85	25(26)	19	80	67	103	112	75	95	53	90	72	102	63	110	80	8.5	36	8	M6X12 (n=8)	45°	8	6	28.3 (31.3)	21.5	M6	50
075	172	205	50	120	90	28(35)	24	95	72	112	120	90	115	57	105	86	119	75	140	93	11	40	10	M6X14 (n=8)	45°	8(10)	8	31.3 (38.3)	27	M8	60
090	206	238	50	140	100	35(38)	24	110	74	130	140	108	130	67	125	103	135	90	160	102	13	45	11	M10X16 (n=8)	45°	10	8	38.3 (41.3)	27	M8	70
110	255	295	60	170	115	42	28	130	-	144	155	135	165	74	142	127.5	167.5	110	200	125	14	50	14	M10X18 (n=8)	45°	12	8	45.3	31	M10	85
130	293	335	80	200	120	45	30	180	-	155	170	155	215	81	162	146.5	187.5	130	250	140	16	60	15	M12X20 (n=8)	45°	14	8	48.8	33	M10	100
150	340	400	80	240	145	50	35	180	-	185	200	175	215	96	195	170	230	150	280	180	18	72.5	18	M12X22 (n=8)	45°	14	10	53.8	38	M12	120

## NMRV025 小机型 / NMRV025 SMALL MODEL



## 减速机选型表 / GEAR UNIT SELECTION TABLES

### NMRV...IEC...性能参数 / PERFORMANCE PARAMETER

$P_{in}$ [kw]	$n_2$ (r/min)	$i$	$M_{20}$ (Nm)	$F_{12}$ (N)	$f_s$		
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		
	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	NMRV030 56B5/B14	5614	
0.09	373.3	7.5	2.0	399			3.9
	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
	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
	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			
70	40	8.0	948	1.8			
56	50	9.4	1021	1.4			
46.7	60	10	1085	1.1			
35	80	13	1194	0.9	NMRV030 56B5/B14	5612	

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{11}$ (kw)	$n_1$ (r/min)	$i$	$M_{21}$ (Nm)	$F_{21}$ (N)	$t_s$				
0.09	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	NMRV050 63B5	6314		
	17.5	80	35	3973	1.9				
	14	100	39	4280	1.4				
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				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{in}$ (N)	$f_s$		
0.18	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		
	56	25	23	1964	1.7	NMRV040 63B5/B14	6324
	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		
	36	25	34	2276	1.3	NMRV040 71B5/B14	7116
	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	NMRV050 63B5	6324
	35	40	33	3153	2.3		
	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	NMRV063 71B5/B14	7116	
15	60	66	5467	2.1			
11.3	80	79	8018	1.6			
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		
	90	10	22	1677	2.0	NMRV040 71B5/B14	7126
	60	15	31	1920	1.4		
45	20	39	2113	1.1			
36	25	48	2276	0.9			
30	30	53	2419	0.9			

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{t2}$ (N)	$f_s$			
0.25	35	80	42	3153	1.1	NMRV050	63B5/B14	6322
	28	100	48	3397	0.8			
	70	20	27	2503	2.7	NMRV050	71B5/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	NMRV050	71B5/B14	7126
	45	20	40	2900	1.9			
	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	4183	0.8	NMRV063	71B5/B14	7114
	28	50	55	4440	2.4			
	23.3	60	63	4719	2.0			
	17.5	80	76	5193	1.6			
	14	100	87	5595	1.4			
	18	50	81	5145	1.8			
15	60	92	5467	1.5	NMRV063	71B5/B14	7126	
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				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{10}$ (kw)	$n_2$ (r/min)	$i$	$M_{20}$ (Nm)	$F_{10}$ (N)	$f_8$				
0.37	56	25	47	2696	1.5	NMRV050 71B5/B14	7124		
	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 80B5/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				
	30	30	80	3320	1.1				
	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	1.8				
14	100	139	6603	1.3					
18	50	124	6073	1.8					
15	60	141	6453	1.5					
11.3	80	173	7103	1.2	NMRV075 80B5/B14			8016	
9	100	196	7380	1.0					
11.3	80	185	7859	1.7					
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		NMRV050 80B5/B14		8014
	186.7	7.5	24	1805	2.9				
	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				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{2m}$ (Nm)	$F_{12}$ (N)	$f_s$			
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	NMRV063	80B5/B14	8014
	70	20	60	3272	2.2			
	56	25	72	3524	1.8			
	46.7	30	82	3745	1.9			
	35	40	104	4122	1.4	NMRV063	80B5/B14	8026
	28	50	122	4440	1.1			
	23.3	60	140	4719	0.9			
	60	15	70	3444	2.2			
	45	20	90	3791	1.6	NMRV075	71B5	7122
	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	80B5/B14	8014
	28	100	116	5241	1.0			
	35	40	108	4865	2.0			
	28	50	128	5241	1.6			
	23.3	60	144	5569	1.4	NMRV075	80B5/B14	8026
	17.5	80	177	6130	1.1			
	14	100	206	6603	0.9			
	30	30	124	5122	2.1			
	22.5	40	156	5637	1.5	NMRV090	80B5/B14	8014
	18	50	184	6073	1.2			
	15	60	210	6453	1.0			
	17.5	80	189	6783	1.5			
14	100	221	7306	1.2	NMRV090	80B5/B14	8026	
18	50	196	6719	2.0				
15	60	224	7140	1.6				
11.3	80	275	7859	1.1				
9	100	315	8180	0.9	NMRV110	80B5	8014	
17.5	80	201	8571	2.6				
14	100	236	9232	2.0				
11.3	80	294	9931	1.9				
9	100	344	10320	1.5	NMRV110	80B5	8026	

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_m$ (kw)	$n_2$ (r/min)	$i$	$M_m$ (Nm)	$F_m$ (N)	$f_s$			
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			
	112	25	52	2797	1.8	NMRV063	80B5/B14	8012
	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			
	70	20	82	3272	1.6	NMRV063	80B5/B14	8024
	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			
	90	10	67	3009	2.3			
	60	15	96	3444	1.6	NMRV063	90B5/B14	90S6
	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			
	35	80	135	4865	1.0			
	28	100	159	5241	0.8	NMRV075	80B5/B14	8012
	56	25	101	4160	2.0			
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	
45	20	124	4474	1.9				
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				
28	100	169	5799	1.2	NMRV090	80B5/B14	8012	
28	50	182	5799	1.9				
23.3	60	209	6163	1.5				
17.5	80	258	6783	1.1				
14	100	302	7306	0.9				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{2r}$ (Nm)	$F_{2r}$ (N)	$f_s$			
0.75	30	30	179	5667	2.6	NMRV090	90B5B14	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	NMRV130	90B5	90S6
	11.3	80	401	12989	2.1			
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			
	90	10	98	3009	1.6	NMRV063	90B5/B14	90L6
	60	15	140	3444	1.1			
	45	20	180	3791	0.8			
	186.7	7.5	50	2359	2.6			
	140	10	65	2597	2.0	NMRV063	90B5/B14	90S4
	93.3	15	92	2973	1.5			
	70	20	120	3272	1.1			
	56	25	144	3524	0.9			
	46.7	30	164	3745	1.0			
	112	25	77	3302	2.0			
	93.3	30	89	3509	1.9	NMRV075	80B5/B14	8022
	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			
	60	15	142	4065	1.7			
45	20	182	4474	1.3	NMRV075	90B5/B14	90L6	
36	25	219	4820	1.0				
30	30	249	5122	1.0				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_m$ (Kw)	$n_e$ (r/min)	$i$	$M_{20}$ (Nm)	$F_{20}$ (N)	$f_s$		
1.1	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	NMRV110 90B5	90L6
	22.5	40	345	7882	2.3		
	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	NMRV130 90B5	90L6	
14	100	473	9232	1.0			
11.3	80	588	12989	1.5			
9	100	689	13500	1.1			
17.5	80	408	11210	2.1			
14	100	480	12076	1.5	NMRV130 90B5	90S4	
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		
	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		
	90	10	134	3551	1.7	NMRV075 100B5/B14	100L6
	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			

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_1$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{in}$ (N)	$f_s$					
1.5	46.7	30	233	4421	1.0	NMRV075	90B5/B14	90L4		
	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					
	56	25	207	4603	1.6	NMRV090	90B5/B14	90L4		
	46.7	30	239	4891	1.7					
	35	40	303	5383	1.2					
	28	50	363	5799	0.9					
	23.3	60	417	6163	0.8					
	56	50	197	4603	1.3					
	46.7	60	227	4891	1.1	NMRV090	90B5/B14	90S2		
	45	20	264	6256	2.7					
	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	NMRV110	100B5	100L6		
	35	40	315	6803	2.2					
	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					
	35	80	299	6803	1.3	NMRV110	90B5	90S2		
28	100	358	7328	1.0						
22.5	40	471	10309	2.3						
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	100B5	100L6			
14	100	655	12076	1.1						
373.3	7.5	51	1873	1.8						
280	10	66	2061	1.5				NMRV063	90B5/B14	90L2
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						

## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{in}$ (N)	$f_s$						
2.2	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						
	56	25	304	4603	1.1						
	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						
	56	25	311	5816	2.2	NMRV110	100B5	100L1-4			
	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						
	60	15	294	5684	2.6				NMRV110	112B5	112M6
	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						
	28	50	563	9584	1.7	NMRV130	100B5	100L1-4			
	23.3	60	657	10185	1.4						
	17.5	80	816	11210	1.0						
	36	25	473	8814	2.2						
	30	30	539	9366	2.2	NMRV130	112B5	112M6			
	22.5	40	691	10309	1.6						
18	50	829	11105	1.3							
15	60	966	11801	1.0							
35	80	444	8897	1.3							
28	100	525	9584	1.0							
28	50	570	13103	2.5	NMRV130	90B5	90L2				
23.3	60	657	13924	1.9							
17.5	80	816	15325	1.4							
14	100	960	16508	1.0							
						NMRV150	100B5	100L1-4			

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$P_m$ (kw)	$n_2$ (r/min)	$i$	$M_{95}$ (Nm)	$F_{r2}$ (Nm)	$f_9$		
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		
	70	20	348	5399	1.9	NMRV110 100B5	100L2-4
	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 132B5	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		
	46.7	30	491	8084	2.1	NMRV130 100B5	100L2-4
	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		
	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			
28	50	778	13103	1.8			
23.3	60	896	13924	1.4	NMRV150 100B5	100L2-4	
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		

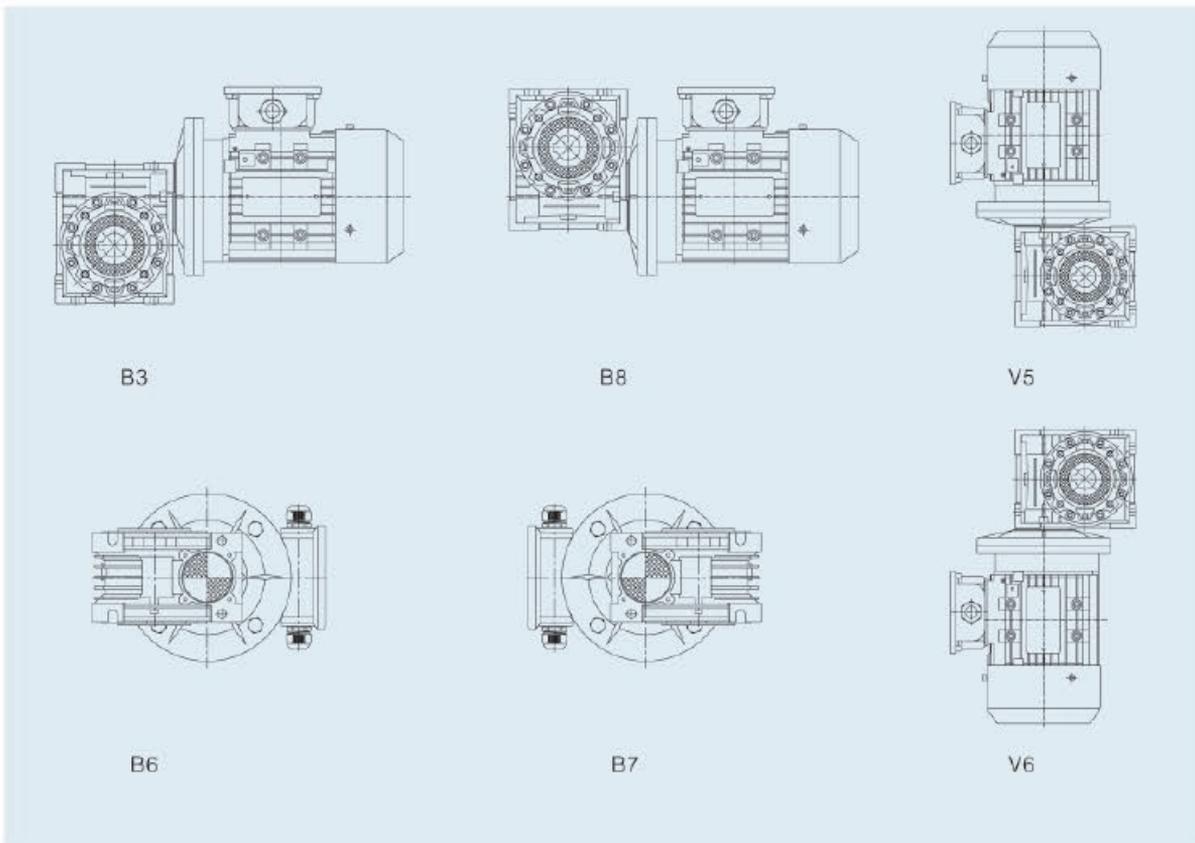
## 减速机选型表 / GEAR UNIT SELECTION TABLES

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{in}$ (N)	$f_s$			
4.0	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			
	90	10	369	4965	1.9	NMRV110	132B5	132M1-6
	60	15	535	5684	1.4			
	56	25	573	7607	1.6			
	46.7	30	655	8084	1.6	NMRV130	112B5	112M4
	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			
	90	10	369	6494	2.6			
	60	15	541	7434	2.0	NMRV130	132B5	132M1-6
45	20	705	8182	1.5				
36	25	860	8814	1.2				
28	50	1037	13103	1.4				
23.3	60	1195	13924	1.1	NMRV150	112B5	112M4	
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			
	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	668	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	NMRV150	132B5	132M4
	70	20	880	9654	1.5			
	56	25	1074	10400	1.1			

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{2c}$ (Nm)	$F_{2c}$ (N)	$f_s$			
7.5	46.7	30	1274	11051	0.9	NMRV150	132B5	132M4
	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			
	70.0	20	1291	9654	1.0			
	56.0	25	1576	10400	0.8			
15	186.7	7.5	696	6962	1.7	NMRV150	160B5	160L4
	140	10	921	7663	1.3			
	93.3	15	1351	8771	0.9			
	70.0	20	1760	9654	0.7			

## 减速机安装方位 / GEAR BOX INSTALLATION POSITION

### NMRV与电机安装方位 / NMRV AND MOTOR MOUNTING POSITION



注: 如在订货时无特别说明, 将按B3安装方式供货。

Note: if there is no special instructions to B3 standards for installation.

## NMRV配件系列 / NMRV ACCESSORIES SERIES

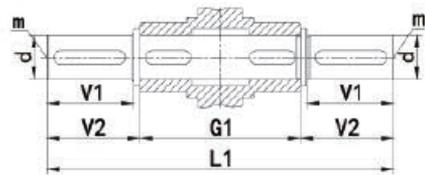
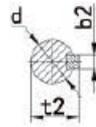
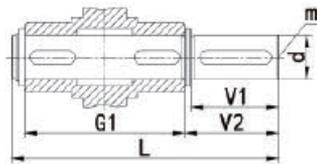
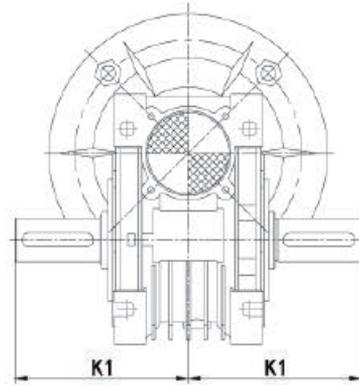
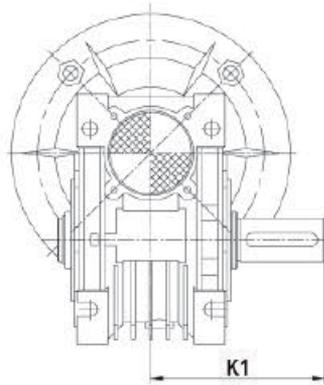
### 输出轴尺寸 / OUTPUT SHAFT SIZE



单向输出轴 (DZ)



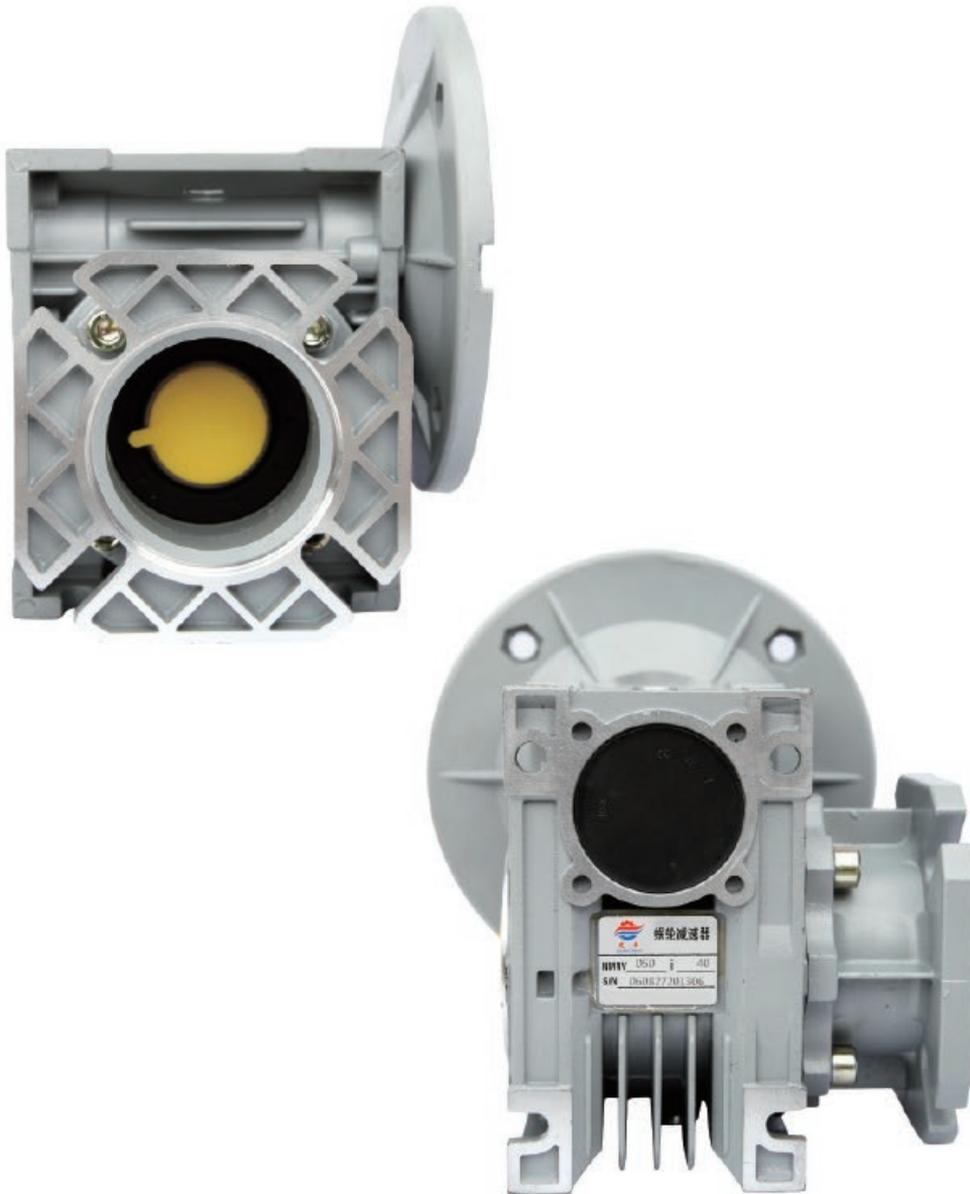
双向输出轴 (SZ)



NMRV	G1	K1	L	L1	b2	t2	d(h6)	m	V1	V2
030	63	64	102	128	5	16	14	M6	30	32.5
040	78	82	128	164	6	20.5	18	M6	40	43
050	92	99.5	153	199	8	28	25	M10	50	53.5
063	112	109.5	173	219	8	28	25	M10	50	53.5
075	120	123.5	192	247	8	31	28	M10	60	63.5
090	140	154.5	234	309	10	38	35	M12	80	84.5
110	155	162	249	324	12	45	42	M16	80	84.5
130	170	170	265	340	14	48.5	45	M16	80	85
150	200	187	297	374	14	53.5	50	M16	82	87

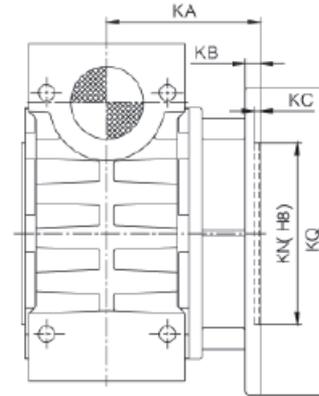
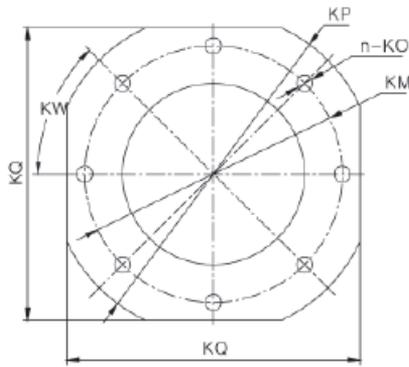
## NMRV配件系列 / NMRV ACCESSORIES SERIES

### 输出法兰 (F) 尺寸 / OUTPUT FLANGE DIMENSIONS (F)



## NMRV配件系列 / NMRV ACCESSORIES SERIES

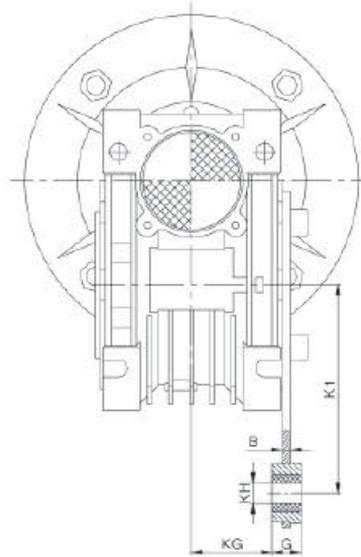
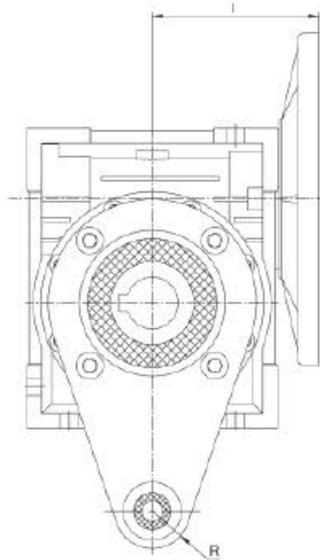
### 输出法兰 (F) 尺寸 / OUTPUT FLANGE DIMENSIONS (F)



NMRV	030	040	050	063	075	090	110	130	150	
FA	KA	54.5	67	90	82	111	111	139	152	155
	KB	6	7	9	10	13	13	15	15	15
	KC	4	4	5	6	6	6	6	6	6
	KN	50	60	70	115	130	152	170	180	180
	KM	68	75	85	150	165	175	230	255	255
	KO	6.5(n=4)	9(n=4)	11(n=4)	11(n=4)	14(n=4)	14(n=4)	14(n=8)	16(n=8)	16(n=8)
	KP	80	110	125	180	200	210	280	320	320
	KQ	70	95	110	142	170	200	260	290	290
	KW	45°	45°	45°	45°	45°	45°	45°	45°	22.5°
FB	KA	-	97	120	112	-	122	-	-	-
	KB	-	7	9	10	-	18	-	-	-
	KC	-	4	5	6	-	6	-	-	-
	KN	-	60	70	115	-	180	-	-	-
	KM	-	75	85	150	-	215	-	-	-
	KO	-	9(n=4)	11(n=4)	11(n=4)	-	14(n=4)	-	-	-
	KP	-	110	125	180	-	250	-	-	-
	KQ	-	95	110	142	-	-	-	-	-
	KW	-	45°	45°	45°	-	45°	-	-	-
FC	KA	-	80	89	98	-	110	-	-	-
	KB	-	9	10	10	-	17	-	-	-
	KC	-	5	5	5	-	6	-	-	-
	KN	-	95	110	130	-	130	-	-	-
	KM	-	115	130	165	-	165	-	-	-
	KO	-	9.5(n=4)	9.5(n=4)	11(n=4)	-	11(n=4)	-	-	-
	KP	-	140	160	200	-	200	-	-	-
	KW	-	45°	45°	45°	-	45°	-	-	-
	FD	KA	-	58	72	107	-	151	-	-
KB		-	12	14.5	10	-	13	-	-	-
KC		-	5	5	5	-	6	-	-	-
KN		-	80	95	130	-	152	-	-	-
KM		-	100	115	165	-	175	-	-	-
KO		-	9(n=4)	11(n=4)	11(n=4)	-	14(n=4)	-	-	-
KP		-	120	140	200	-	210	-	-	-
KW		-	45°	45°	45°	-	45°	-	-	-
FE		KA	-	-	-	80.5	-	-	-	-
	KB	-	-	-	16.5	-	-	-	-	-
	KC	-	-	-	5	-	-	-	-	-
	KN	-	-	-	110	-	-	-	-	-
	KM	-	-	-	130	-	-	-	-	-
	KO	-	-	-	11(n=4)	-	-	-	-	-
	KP	-	-	-	160	-	-	-	-	-
	KW	-	-	-	45°	-	-	-	-	-

## NMRV配件系列 / NMRV ACCESSORIES SERIES

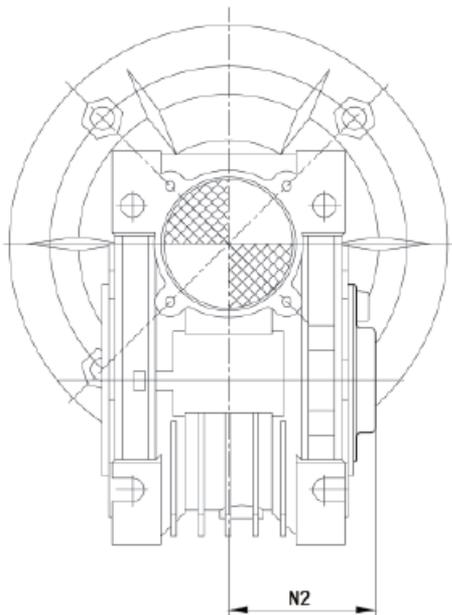
### 扭力臂 (A) 尺寸 / TORQUE ARM (A) SIZE



NMRV	B	I	K1	G	KG	KH	R
025	4	45	70	14	17.5	8	15
030	4	55	85	14	24	8	15
040	4	70	100	14	31.5	10	18
050	4	80	100	14	38.5	10	18
063	6	95	150	14	49	10	18
075	6	112.5	200	25	47.5	20	30
090	6	129.5	200	25	57.5	20	30
110	6	160	250	30	62	25	35
130	6	179	250	30	69	25	35
150	8	210	250	30	84	25	35

NMRV配件系列 / NMRV ACCESSORIES SERIES

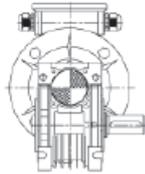
防尘盖尺寸 / DUST COVER SIZE



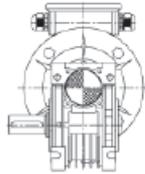
NMRV	N2
030	42
040	50
050	58
063	69
075	74
090	85
110	94
130	102
150	117

## 配件安装方位 / ACCESSORIES INSTALLATION POSITION

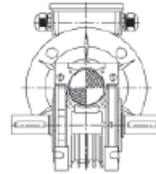
### 输出轴位置 / THE OUTPUT SHAFT POSITION



DZ1



DZ2

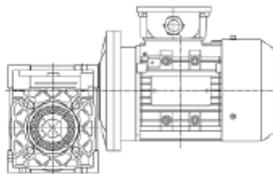


SZ

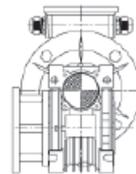
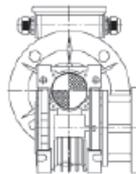
注：如没有特别说明，将按照如图DZ1和B3安装方面的组合样式供货。

Note: If there is no special instructions, will be as shown in figure DZ1 and B3 mounted with respect to the combination of styles available.

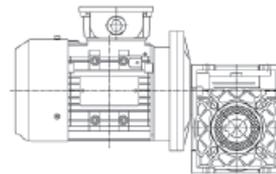
### 输出法兰位置 / OUTPUT FLANGE POSITION



FA1, FB1, FC1, FD1, FE1



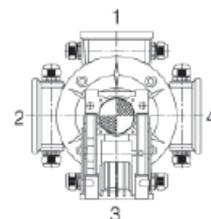
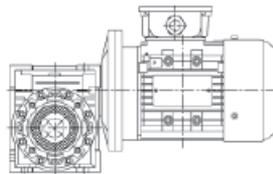
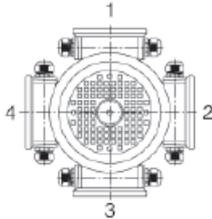
FA2, FB2, FC2, FD2, FE2



注：如没有特别说明，将按照如图F...1和B3安装方面的组合样式供货。

Note: If there is no special instructions, will be in accordance with the figure F... 1 and B3 mounted with respect to the combination of styles available.

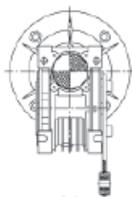
### 电机接线盒位置 / MOTOR TERMINAL BOX POSITION



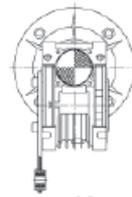
注：如对电机接线盒位置有特别要求，订购时须参考上图的要求指定接线盒方位，否则接线盒方位将按安装方位图表中的方位提供。

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

### 扭力臂(A)位置 / TORQUE ARM (A) POSITION



A1

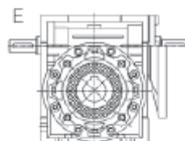


A2

注：如没有特别说明，将按照如图A1和B3安装方面的组合样式供货。

Note: If there is no special instructions, will be as shown in figure A1 and B3 mounted with respect to the combination of styles available.

### 尾出轴(E) / TAIL SHAFT (E) POSITION





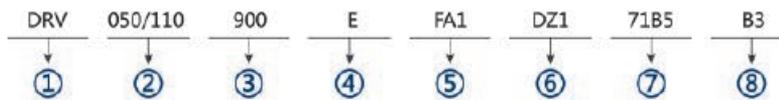
# COMBINATION SERIES

组合系列

应用领域: 自动化生产领域

## 型号说明 / MODEL ILLUMINATE

### DRV双蜗轮蜗杆减速机 / COMBINATION WORM GEAR UNITS



NO	说明	Comments
1	型号代码: DRV双联体蜗轮蜗杆减速机	Model code: DRV duplex worm reducer
2	蜗轮蜗杆减速机中心距(规格)	Central distance of worm gear units (spec)
3	减速机速比	Speed ratio of reducer
4	1. 无代号表示不带蜗杆同向尾出轴 2. 带蜗杆同向尾出轴	1. No mark means single extension worm shaft 2. E: Double extension worm shaft
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	1. No mark means hole output flange 2. FA, FB, FC, FD, FE(1/2): output Flange and position
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	1. No mark means hole output 2. DZ(1/2): Single output shaft and position 3. SZ: Double output shaft
7	输入法兰规格型式	Normalized form of input flange
8	安装方位代号	Installation position code

## DRV产品介绍 / DRV PRODUCT INTRODUCTION

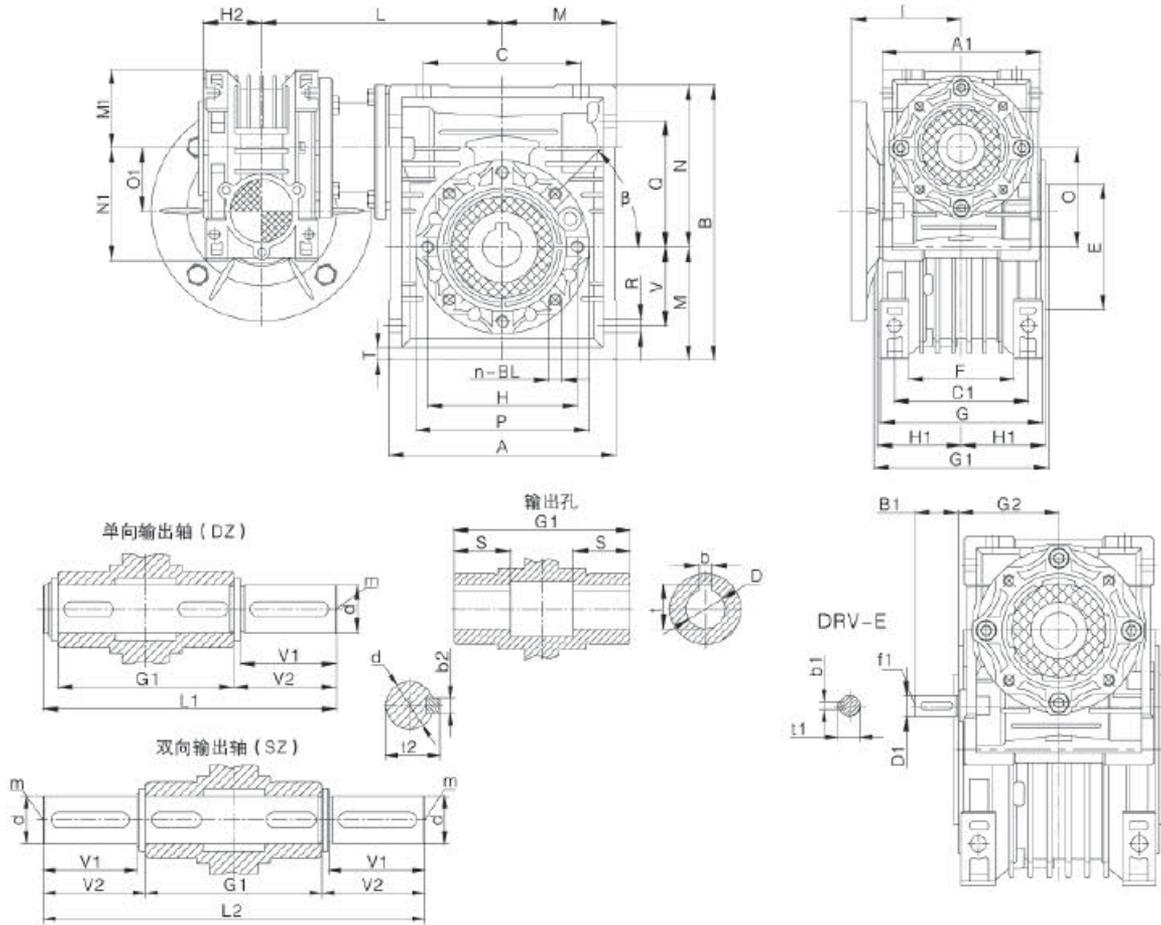


不带电机  
without the motor



带电机  
with motor

DRV尺寸 / DRV SIZE



DRV	A	A1	B	B1	C	C1	D(H7)	D1(j6)	E(h8)	F	G	G1	G2	H	H1	H2	L	L1	L2	M	M1	N	N1	O	O1
025-030	80	70	97	-	54	44	14	-	55	32	56	63	-	65	29	22.5	100	102	128	40	35	57	48	30	25
025-040	100	70	121.5	-	70	60	18(19)	-	60	43	71	78	-	75	36.5	22.5	115	128	164	50	35	71.5	48	40	25
030-040	100	80	121.5	20	70	60	18(19)	9	60	43	71	78	51	75	36.5	29	120	128	164	50	40	71.5	57	40	30
030-050	120	80	144	20	80	70	25(24)	9	70	49	85	92	51	85	43.5	29	130	153	199	60	40	84	57	50	30
030-063	144	80	174	20	100	85	25(28)	9	80	67	103	112	51	95	53.0	29	145	173	219	72	40	102	57	63	30
040-075	172	100	205	23	120	90	28(35)	11	95	72	112	120	60	115	57.0	36.5	165	192	247	86	50	119	71.5	75	40
040-090	206	100	238	23	140	100	35(38)	11	110	74	130	140	60	130	67.0	36.5	182	234	309	103	50	135	71.5	90	40
050-110	255	120	295	30	170	115	42	14	130	-	144	155	74	165	74.0	43.5	225	249	324	127.5	60	167.5	84	110	50
063-130	293	144	335	40	200	120	45	19	180	-	155	170	90	215	81.0	53	245	255	340	146.5	72	187.5	102	130	63
063-150	340	144	400	40	240	145	50	19	180	-	185	200	90	215	96	53	275	297	374	170	72	230	102	150	63

DRV	P	Q	R	S	T	BL	β	b	b1	b2	t	t1	t2	d(h6)	t1	m	v	V1	V2
025-030	75	44	6.5	21	5.5	M6 × 10(n=4)	0°	5	-	5	16.3	-	16	14	-	M6	27	30	32.5
025-040	87	55	6.5	26	6.5	M6 × 10(n=4)	45°	6	-	6	20.8(21.8)	-	20.5	18	-	M6	35	40	43
030-040	87	55	6.5	26	6.5	M6 × 10(n=4)	45°	6(6)	3	6	20.8(21.8)	10.2	20.5	18	-	M6	35	40	43
030-050	100	64	8.5	30	7	M8 × 12(n=4)	45°	8(8)	3	8	28.3(27.3)	10.2	28	25	-	M10	40	50	53.5
030-063	110	80	8.5	36	8	M8 × 12(n=8)	45°	8(8)	3	8	28.3(31.3)	10.2	28	25	-	M10	50	50	53.5
040-075	140	93	11	40	10	M8 × 14(n=8)	45°	8(10)	4	8	31.3(38.3)	12.5	31	28	-	M10	60	60	63.5
040-090	160	102	13	45	11	M10 × 16(n=8)	45°	10	4	10	38.3(41.3)	12.5	38	35	-	M12	70	80	84.5
050-110	200	125	14	50	14	M10 × 18(n=8)	45°	12	5	12	45.3	16.0	45	42	M6	M16	85	80	84.5
063-130	250	140	16	60	15	M12 × 20(n=8)	45°	14	6	14	48.3	21.5	48.5	45	M6	M16	100	80	85
063-150	250	180	18	72	18	M12 × 22(n=8)	45°	14	6	14	53.8	21.5	53.5	50	M6	M16	120	82	87

## NMRV+NMRV/NRV+NMRV组合方式 / POSSIBLE COMBINATIONS

	i	n <sub>2</sub>	IEC motor	i <sub>1</sub>	i <sub>2</sub>		i	n <sub>2</sub>	IEC motor	i <sub>1</sub>	i <sub>2</sub>
DRV 025/030	100	14	56	10	10	DRV 040/075	300	4.7	56 63 71	10	30
	150	9.3		10	15		400	3.5		10	40
	200	7		10	20		500	2.8		10	50
	250	5.6		10	25		600	2.3		20	30
	300	4.7		10	30		750	1.9		25	30
	400	3.5		20	20		900	1.6		30	30
	500	2.8		20	25		1200	1.2		30	40
	600	2.3		20	30		1500	0.93		50	30
	750	1.9		30	25		1800	0.78		60	30
	900	1.6		30	30		2400	0.58		60	40
	1200	1.2		40	30		3000	0.47		60	50
	1500	0.93		50	30		4000	0.35		50	80
	1800	0.78		60	30		5000	0.28		50	100
	2400	0.58		60	40						
	3000	0.47		60	50						
DRV 025/040	300	4.7	56	10	30	DRV 040/090	300	4.7	56 63 71	7.5	40
	400	3.5		10	40		400	3.5		10	40
	500	2.8		20	25		500	2.8		10	50
	600	2.3		20	30		600	2.3		15	40
	750	1.9		30	25		750	1.9		15	50
	900	1.6		30	30		900	1.6		15	60
	1200	1.2		40	30		1200	1.2		30	40
	1500	0.93		50	30		1500	0.93		30	50
	1800	0.78		60	30		1800	0.78		30	60
	2400	0.58		60	40		2400	0.58		60	40
	3000	0.47		60	50		3000	0.47		60	50
	4000	0.35		50	80		4000	0.35		50	80
	5000	0.28		50	100		5000	0.28		50	100
DRV 030/040	300	4.7	56	10	30	DRV 050/110	300	4.7	63 71 80	10	30
	400	3.5		10	40		400	3.5		10	40
	500	2.8		20	25		500	2.8		10	50
	600	2.3		20	30		600	2.3		15	40
	750	1.9		25	30		750	1.9		25	30
	900	1.6		30	30		900	1.6		30	30
	1200	1.2		30	40		1200	1.2		30	40
	1500	0.93		50	30		1500	0.93		50	30
	1800	0.78		60	30		1800	0.78		60	30
	2400	0.58		60	40		2400	0.58		60	40
	3200	0.44		80	40		3000	0.47		60	50
	4000	0.35		50	80		4000	0.35		50	80
	5000	0.28		50	100		5000	0.28		50	100
DRV 030/050	300	4.7	56 63	10	30	DRV 063/130	300	4.7	71 80 90	10	30
	400	3.5		10	40		400	3.5		10	40
	500	2.8		10	50		500	2.8		10	50
	600	2.3		20	30		600	2.3		15	40
	750	1.9		25	30		750	1.9		25	30
	900	1.6		30	30		900	1.6		30	30
	1200	1.2		30	40		1200	1.2		30	40
	1500	0.93		50	30		1500	0.93		50	30
	1800	0.78		60	30		1800	0.78		60	30
	2400	0.58		60	40		2400	0.58		60	40
	3000	0.47		60	50		3000	0.47		60	50
	4000	0.35		50	80		4000	0.35		50	80
	4800	0.29		60	80		5000	0.28		50	100
DRV 030/063	300	4.7	56 63	7.5	40	DRV 063/150	150	9.3	71 80 90	10	15
	400	3.5		10	40		200	7.1		10	20
	500	2.8		10	50		250	5.6		10	25
	600	2.3		15	40		300	4.7		10	30
	750	1.9		15	50		400	3.5		10	40
	900	1.6		15	60		500	2.8		10	50
	1200	1.2		30	40		600	2.3		15	40
	1500	0.93		30	50		750	1.9		25	30
	1800	0.78		30	60		900	1.6		30	30
	2400	0.58		60	40		1200	1.2		30	40
	3000	0.47		60	50		1800	0.78		60	30
	4000	0.35		50	80		2400	0.58		60	40
	5000	0.28		50	100		3000	0.47		60	50
							4000	0.35		50	80
							5000	0.28		50	100

注：用户有特殊要求时，可根据实际需要选择025、030、040、050、063、075、090、110、130、150作为组合单元另行组合。  
Note: users have special requirement, can according to the actual need to select 025, 030, 040, 050, 063, 075, 090, 110, 130, 150 as a combined unit further combination.

## 减速机选型表 / GEAR UNIT SELECTION TABLES

### DRV性能参数 PERFORMANCE PARAMETERS

$P_{in}$ (kW)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_2$ (N)	$f_s$		
0.09	28.0	100	18	1266	1.6	DRV025/030	5612
	18.7	150	25	1472	1.1		
	14.0	200	31	1620	0.9		
	14.0	100	37	1620	0.8		
	9.3	150	50	1830	0.6		
	7.0	200	61	1830	0.5		
	5.6	250	68	1830	0.5		
	4.7	300	77	1830	0.4		
	3.5	400	106	1830	0.3		
	2.8	500	117	1830	0.3		
	2.3	600	135	1830	0.2		
	1.9	750	149	1830	0.2		
	1.6	900	167	1830	0.2		
	1.2	1200	201	1830	0.1		
	0.9	1500	231	1830	0.1		
	0.8	1800	264	1830	0.1		
	0.6	2400	311	1830	0.1		
	0.5	3000	347	1830	0.1		
	9.3	300	43	3490	1.6	DRV025/040	5612
	7.0	400	52	3490	1.2		
	5.6	500	71	3490	0.8		
	4.7	300	82	3490	0.8	DRV030/040	5624
	3.5	400	103	4840	1.2	DRV030/050	5624
	2.8	500	120	4840	1.0		
	2.3	600	146	4840	0.9		
	1.9	750	158	4840	0.8		
	1.6	900	177	4840	0.7		
	1.6	900	188	6270	1.0		
	1.2	1200	222	6270	0.9	DRV030/063	5624
	0.9	1500	259	6270	0.7		
0.9	1500	305	7380	1.1			
0.8	1800	331	7380	1.0	DRV040/075	5624	
0.6	2400	400	7380	0.7			
0.5	3000	494	8180	0.9			
0.4	4000	589	8180	0.8	DRV040/090	5624	
0.12	4.7	300	112	4840	1.2	DRV030/050	6314
	3.5	400	138	4840	0.9		
	2.8	500	160	4840	0.7		
	2.8	500	168	6270	1.3		
	2.3	600	199	6270	1.1	DRV030/063	6314
	1.9	750	217	6270	0.9		
	1.6	900	279	7380	1.2		
	1.2	1200	344	7380	0.9	DRV040/075	6314
	0.8	1800	470	8180	0.9		
	0.6	2400	593	8180	0.9		
	0.5	3000	731	10320	1.2	DRV040/090	6314
	0.4	4000	884	10320	1.0		
	0.4	4000	884	10320	1.0		
	0.3	5000	1023	10320	0.8		

## 减速机选型表 / GEAR UNIT SELECTION TABLES

### DRV性能参数 PERFORMANCE PARAMETERS

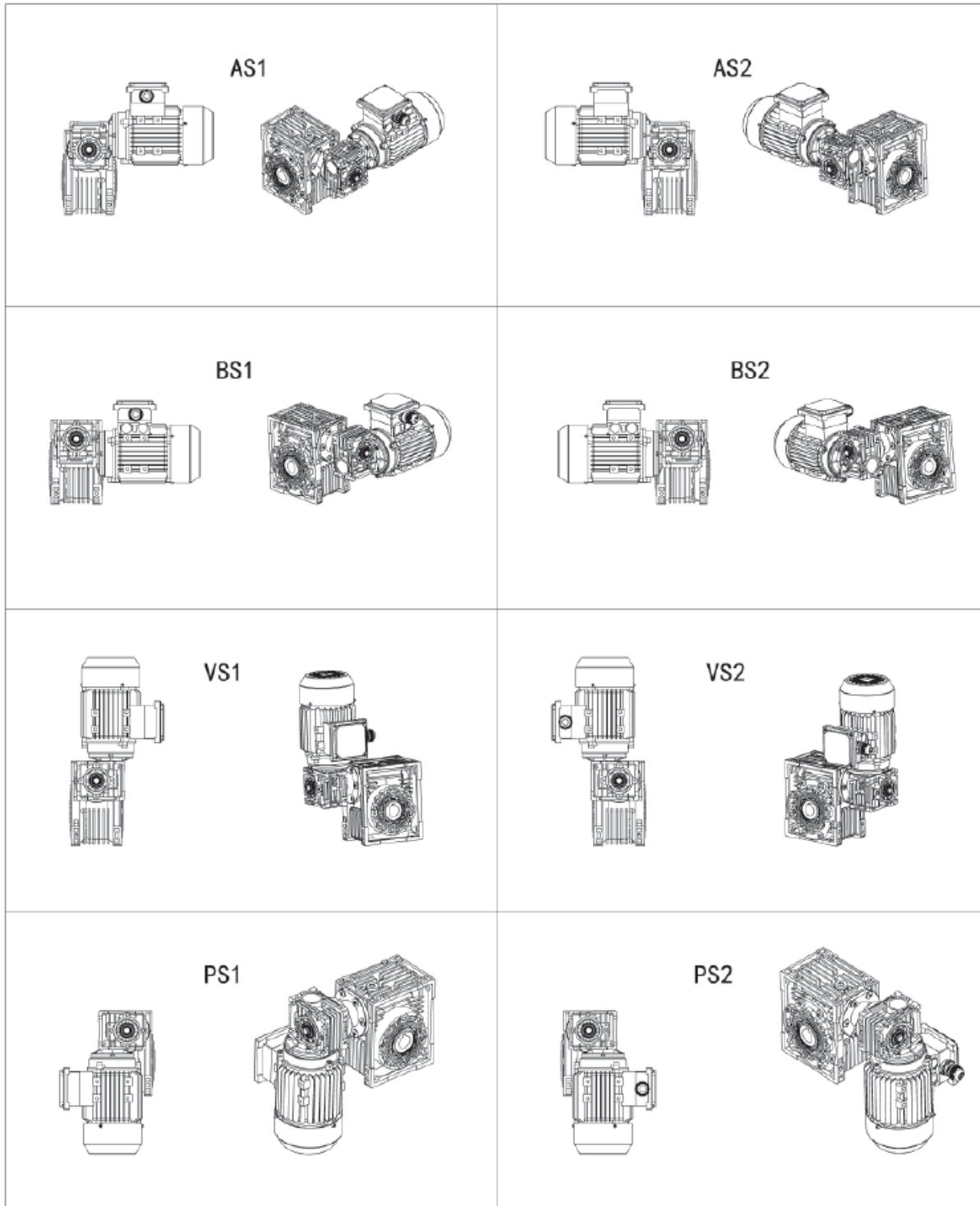
$P_n$ (kw)	$n_2$ (r/min)	$i$	$M_n$ (Nm)	$F_{12}$ (N)	$f_s$				
0.18	3.5	400	216	6270	1.0	DRV030/063	6324		
	2.8	500	252	6270	0.8				
	2.3	600	336	7380	1.1	DRV040/075	6324		
	1.9	750	371	7380	0.9				
	1.6	900	419	7380	0.8				
	1.2	1200	544	8180	1.0				
	0.9	1500	647	8180	0.8	DRV040/090	6324		
	0.8	1800	727	10320	1.5				
0.6	2400	948	10320	1.1	DRV050/110	6324			
0.25	7.0	400	150	6270	1.4	DRV030/063	6322		
	5.6	500	175	6270	1.2				
	3.5	400	321	7380	1.1	DRV040/075	7114		
	2.8	500	375	7380	0.8				
	2.3	600	488	8180	1.2	DRV040/090	7114		
	1.9	750	553	8180	0.9				
	1.6	900	612	8180	0.8				
	1.2	1200	776	10320	1.3				
	0.9	1500	924	10320	1.2	DRV050/110	7114		
	0.8	1800	1010	10320	1.1				
	0.6	2400	1358	13500	1.0	DRV063/130	7114		
	0.5	3000	1628	13500	0.8				
	0.4	4000	1910	13500	0.6				
	0.3	5000	2132	13500	0.5				
	0.8	1800	1199	18000	1.8			DRV063/150	7114
	0.6	2400	1446	18000	1.8				
	0.5	3000	1713	18000	1.4				
	0.4	4000	2026	18000	0.9				
0.3	5000	2251	18000	0.7					
0.37	9.3	300	182	6270	1.3	DRV030/063	7112		
	7.0	400	222	6270	1.0				
	4.7	300	383	7380	1.0	DRV040/075	7124		
	3.5	400	474	7380	0.7				
	4.7	300	406	8180	1.5	DRV040/090	7124		
	3.5	400	505	8180	1.2				
	2.8	500	593	8180	0.9				
	2.3	600	722	8180	0.8				
	1.9	750	837	10320	1.3	DRV050/110	7124		
	1.6	900	928	10320	1.2				
	1.2	1200	1148	10320	0.8	DRV063/130	7124		
	0.9	1500	1444	13500	1.1				
	0.8	1800	1586	13500	0.9	DRV063/150	7124		
	0.8	1800	1775	18000	1.2				
	0.6	2400	2141	18000	1.2				
0.5	3000	2535	18000	0.9					
0.55	9.3	300	305	8180	2.0	DRV040/090	7122		
	7.0	400	375	8180	1.5				
	5.6	500	441	8180	1.2				
	4.7	300	615	10320	2.0	DRV050/110	8014		
	3.5	400	810	10320	1.4				
	2.8	500	938	10320	1.1				
	2.3	600	1096	10320	1.0				
1.9	750	1244	10320	0.9					

## 减速机选型表 / GEAR UNIT SELECTION TABLES

### DRV性能参数 PERFORMANCE PARAMETERS

$P_{in}$ (kw)	$n_2$ (r/min)	$i$	$M_{in}$ (Nm)	$F_{in}$ (N)	$t_s$		
0.55	2.8	500	957	13500	1.6	DRV063/130	8014
	1.9	750	1382	13500	1.2		
	1.2	1200	2057	13500	0.8		
	0.8	1800	2638	18000	0.8		
	0.6	2400	3182	18000	0.6		
0.75	9.3	300	424	10320	2.8	DRV050/110	8012
	7.0	400	553	10320	2.1		
	5.6	500	640	10320	1.6		
	4.7	300	838	10320	1.5	DRV050/110	8024
	3.5	400	1105	10320	1.1		
	2.8	500	1305	13500	1.1		
	2.3	600	1557	13500	1.0	DRV063/130	8024
	1.9	750	1772	13500	0.9		
	1.6	900	2014	13500	0.8		
	2.8	500	1291	18000	1.8	DRV063/150	8024
	2.3	600	1529	18000	1.7		
	1.9	750	1783	18000	1.3		
	1.6	900	2215	18000	0.9		
	1.2	1200	2680	18000	1		
	1.1	9.3	300	621	10320		
7.0		400	810	10320	1.4		
5.6		500	938	10320	1.1		
4.7		300	1274	13500	1.3	DRV063/130	90S4
3.5		400	1621	13500	1.0		
2.8		500	1913	13500	0.8		
9.3		150	753	18000	3.1	DRV063/150	90S4
7		200	966	18000	2.4		
5.6		250	1175	18000	1.7		
4.7		300	1364	18000	1.7		
3.5		400	1619	18000	1.6		
2.8		500	1893	18000	1.2		
2.3		600	2242	18000	1.2		
1.9		750	2616	18000	0.9		
1.5		9.3	300	878	13500	1.9	DRV063/130
	7.0	400	1105	13500	1.4		
	5.6	500	1305	13500	1.1		
	4.7	300	1737	13500	1.0	DRV063/130	90L4
	3.5	400	2210	13500	0.7		
	9.3	150	1026	18000	2.3		
	7	200	1317	18000	1.8	DRV063/150	90L4
	5.6	250	1602	18000	1.3		
	4.7	300	1860	18000	1.3		
	3.5	400	2208	18000	1.2		
	2.8	500	2582	18000	0.9		
	2.3	600	3057	18000	0.9		

DRV组合带电机安装方位  
DRV COMBINED WITH MOTOR MOUNTING POSITION



第一级和第二级减速机按上图方式组合，如在订货时没有特别说明，将按照AS2组合方式供货；  
第二级减速机实际安装方式参照51页的安装方位图。

Note: the first stage and the second stage reducer according to the above combinations, such as when the ordering is not specified, will be in accordance with the AS2 combination supply; second stage reducer practical mode of installation 51 installation azimuth diagram.

## 型号说明 / MODEL ILLUMINATE

UDL-NMRV无级变速器与蜗轮蜗杆减速机组合 / COMBINATION OF STEPLESS SPEED VARIATOR AND WORM GEAR UNITS

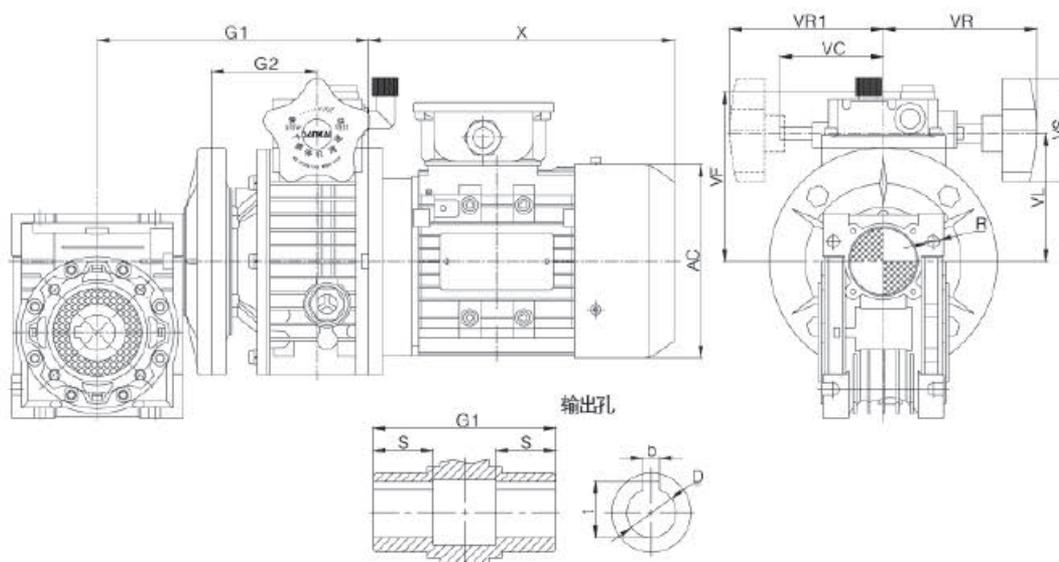
UD	L	010	-	NMRV	063	-	40	E	FA1	DZ1	B3
①	②	③		④	⑤		⑥	⑦	⑧	⑨	⑩

NO	说明	Comments
1	无级变速器代号	Code of stepless speed variator
2	铝合金机壳, 不标注时为铸铁机壳	Aluminium alloy housing, and no mark means cast iron casing
3	无级变速器机座号	Continuously variable transmission model
4	蜗轮蜗杆减速机代码	Code of worm gear units
5	蜗轮蜗杆减速机中心距 (规格)	Central distance of worm gear units(spec)
6	蜗轮蜗杆减速机速比	Speed ratio of worm gear units
7	1.无代号表示不带输出法兰 2.E:带蜗杆同向输出轴	1.No mark means single-extension worm shaft 2.E:Double extension worm shaft
8	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	1.No mark means without output flange 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.DZ(1/2):Single output shaft and position 3.SZ:Double output shaft
10	安装方位代号	Installation position code

## UDL+NMRV产品介绍 / UDL+NMRV DURING INTRODUCTION



## UDL+NMRV尺寸 / UDL+NMRV SIZE



型号 (model)	D(H8)	b	t	G1	G2	S	VF	VL	VR	VR1
UDL002-NMRV030	14	5	16.3	167.5	119.5	21	111	78	110	110
UDL002-NMRV040	18(19)	6	20.8(21.8)	182.5	134.5	26	111	78	110	110
UDL005-NMRV040				180	144		123	90	110	110
UDL002-NMRV050	25(24)	8	28.3(27.3)	192.5	144.5	30	111	78	110	110
UDL005-NMRV050				190	154		123	90	110	110
UDL005-NMRV063	25(28)	8	28.3(31.3)	205	169	36	123	90	110	110
UDL010-NMRV063				234	180.5		140	107	120	120
UDL005-NMRV075	28(35)	8(10)	31.3(38.3)	222.5	186.5	40	123	90	110	110
UDL010-NMRV075				251.5	198		140	107	120	120
UD020-NMRV075				300.5	227.5		144	122	150	-
UDL010-NMRV090	35(38)	10	38.3(41.3)	268.5	215	45	140	107	120	120
UD020-NMRV090				317.5	244.5		144	122	150	-
UDL010-NMRV110	42	12	45.3	299	245.5	50	140	107	120	120
UD020-NMRV110				348	275		144	122	150	-
UD030-NMRV110				368	291		188	150	160	-
UD020-NMRV130	45	14	48.8	368	295	60	144	122	150	-
UD030-NMRV130				388	311		188	150	160	-

注：1. NMRV的其它尺寸请参考24页  
2. UDL的其它尺寸请参考57, 59页  
3. X、AC尺寸请参考94页

## 减速机选型表 / GEAR UNIT SELECTION TABLES

UDL.NMRV.( $n_1=1400r/min$ ) 性能参数 PERFORMANCE PARAMETER

$P_m$ (kw)	$n_2$ (r/min)	$i$	$M_{2m}$ (Nm)				
0.18	117~22.5	12~61.5	9~18	UDL002-NMRV040	6324		
	88~17	16~82	12~23				
	58.7~11.3	24~123	17~32				
	44~8.5	32~164	22~40				
	35.2~6.8	40~205	27~47				
	29.3~5.7	48~246	30~51				
	22~4.3	64~328	37~62				
	17.6~3.4	80~410	43~60				
	22~4.3	64~328	38~63			UDL002-NMRV050	6324
	17.6~3.4	80~410	44~73				
	14.7~2.8	96~492	50~80				
	11~2.1	128~656	59~82				
0.37	8.8~1.7	160~820	66~79	UDL005-NMRV050	7124		
	133~26.7	10.5~52.5	19~36				
	100~20	14~70	25~47				
	66.7~13.3	21~105	36~65				
	50~10	29~140	46~82				
	40~8	35~175	55~97				
	33.3~6.7	42~210	61~107				
	25~5	56~280	76~124				
	20~4	70~350	89~120				
	25~5	56~280	79~134			UDL005-NMRV063	7124
	20~4	70~350	92~155				
	16.7~3.3	84~420	104~173				
12.5~2.5	112~560	125~173					
0.55	10~2	140~700	139~150	UDL010-NMRV063	8014		
	133~26.7	10.5~52.5	26~49				
	100~20	14~70	34~63				
	66.7~13.3	21~105	48~88				
	50~10	29~140	62~112				
	40~8	35~175	75~133				
	33.3~6.7	42~210	81~146				
	25~5	56~280	105~179				
	20~4	70~350	123~207				
	20~4	70~350	129~216			UDL010-NMRV075	8014
	16.7~3.3	84~420	146~242				
	12.5~2.5	112~560	176~250				
12.5~2.5	112~560	189~309					
0.75	10~2	140~700	218~350	UDL010-NMRV090	8014		
	133~26.7	10.5~52.5	39~73				
	100~20	14~70	51~94				
	66.7~13.3	21~105	72~132				
	50~10	29~140	92~168				
	40~8	35~175	112~199				
	33.3~6.7	42~210	126~219				
	25~5	56~280	156~232				
	20~4	70~350	185~310				
	20~4	70~350	192~320			UDL010-NMRV075	8024
	16.7~3.3	84~420	219~300				

## 减速机选型表 / GEAR UNIT SELECTION TABLES

UDL..NMRV..(n<sub>1</sub>=1400r/min) 性能参数 PERFORMANCE PARAMETER

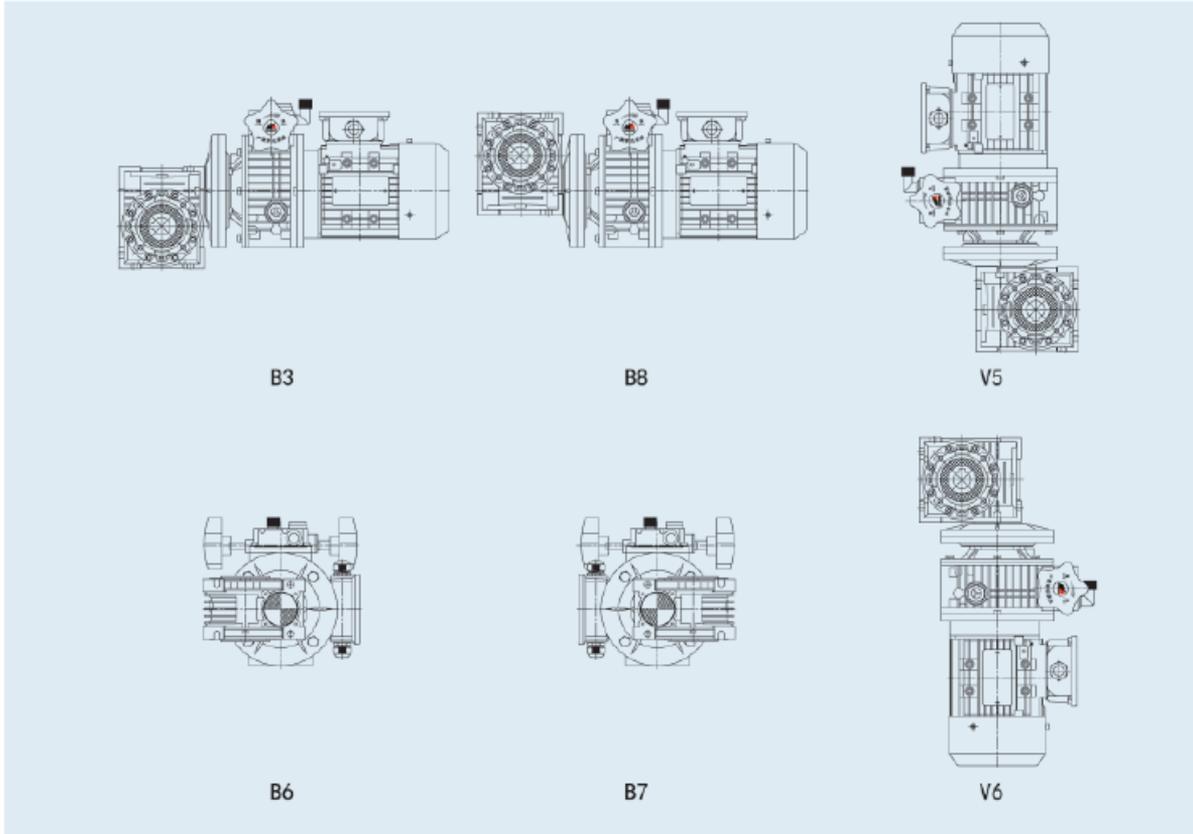
P <sub>e</sub> (kw)	n <sub>2</sub> (r/min)	i	M <sub>2e</sub> (Nm)		
0.75	16.7~3.3	84~420	230~389	UDL010-NMRV090	8024
	12.5~2.5	112~560	265~428		
	10~2	140~700	303~410		
	12.5~2.5	112~560	302~503		
	10~2	140~700	348~575		
1.1	133~26.7	10.5~52.5	59~111	UD020-NMRV075	90S4
	100~20	14~70	77~144		
	66.7~13.3	21~105	110~203		
	50~10	28~140	142~258		
	40~8	35~175	172~308		
	33.3~6.7	42~210	195~340		
	25~5	56~280	245~360		
	100~20	14~70	78~146		
	66.7~13.3	21~105	113~208	UD020-NMRV090	90S4
	50~10	28~140	146~266		
	40~8	35~175	177~320		
	33.3~6.7	42~210	202~356		
	25~5	56~280	256~442		
	20~4	70~350	304~517		
	20~4	70~350	320~550		
	16.7~3.3	84~420	368~625		
	12.5~2.5	112~560	455~754	UD020-NMRV110	90S4
	10~2	140~700	522~710		
	16.7~3.3	84~420	373~623		
	12.5~2.5	112~560	460~749		
10~2	140~700	531~868	UD020-NMRV130	90S4	
133~26.7	10.5~52.5	78~148			
1.5	100~20	14~70	102~192	UD020-NMRV075	90L4
	66.7~13.3	21~105	147~270		
	50~10	28~140	190~344		
	40~8	35~175	229~330		
	33.3~6.7	42~210	260~390		
	25~5	56~280	327~360		
	133~26.7	10.5~52.5	77~150		
	100~20	14~70	104~195		
	66.7~13.3	21~105	150~277	UD020-NMRV090	90L4
	50~10	28~140	194~355		
	40~8	35~175	236~427		
	33.3~6.7	42~210	270~474		
	25~5	56~280	341~589		
	20~4	70~350	406~560		
	20~4	70~350	426~733		
	16.7~3.3	84~420	490~833		
	16.7~3.3	84~420	498~831	UD020-NMRV110	90L4
	12.5~2.5	112~560	614~999		
	10~2	140~700	696~1100		
	133~26.7	10.5~52.5	120~226		
2.2	100~20	14~70	157~294	UD030-NMRV110	100L1-4
	66.7~13.3	21~105	228~418		
	100~20	14~70	157~294		

## 减速机选型表 / GEAR UNIT SELECTION TABLES

UDL..NMRV..(n<sub>1</sub>=1400r/min) 性能参数 PERFORMANCE PARAMETER

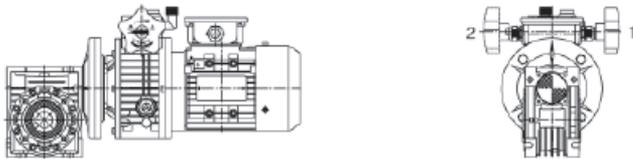
P <sub>in</sub> (kw)	n <sub>2</sub> (r/min)	i	M <sub>2n</sub> (Nm)					
2.2	50~10	28~140	298~549	UD030-NMRV110	100L1-4			
	40~8	35~175	364~664					
	33.3~6.7	42~210	413~717					
	25~5	56~280	533~931					
	25~5	56~280	542~932					
	20~4	70~350	648~1097					
	16.7~3.3	84~420	746~1246					
	12.5~2.5	112~560	921~1499					
3.0	10~2	140~700	1040~169	UD030-NMRV130	100L1-4			
	133~26.7	10.5~52.5	160~302					
	100~20	14~70	210~392					
	66.7~13.3	21~105	304~558					
	50~10	28~140	398~732					
	40~8	35~175	485~885					
	33.3~6.7	42~210	547~956					
	25~5	56~280	711~1030					
	3.0	133~26.7	10.5~52.5	160~301	UD030-NMRV110	100L2-4		
		100~20	14~70	211~395				
		66.7~13.3	21~105	307~563				
		50~10	28~140	402~733				
		40~8	35~175	490~885				
		33.3~6.7	42~210	562~973				
		25~5	56~280	720~1242				
		20~4	70~350	864~1463				
4.0		133~26.7	10.5~52.5	213~402			UD030-NMRV130	100L2-4
		100~20	14~70	279~523				
		66.7~13.3	21~105	405~744				
		50~10	28~140	530~975				
	40~8	35~175	647~1020					
	133~26.7	10.5~52.5	214~401					
	100~20	14~70	281~527					
	66.7~13.3	21~105	410~751					
	4.0	50~10	28~140	536~978	UD050-NMRV110	112M4		
		40~8	35~175	653~1180				
		33.3~6.7	42~210	749~1298				
		25~5	56~280	960~1650				
		133~26.7	10.5~52.5	214~401			UD050-NMRV130	112M4
		100~20	14~70	281~527				
		66.7~13.3	21~105	410~751				
		50~10	28~140	536~978				
40~8	35~175	653~1180						
33.3~6.7	42~210	749~1298						
25~5	56~280	960~1650						

## UDL与NMRV安装方位 UDL AND NMRV INSTALLATION POSITION



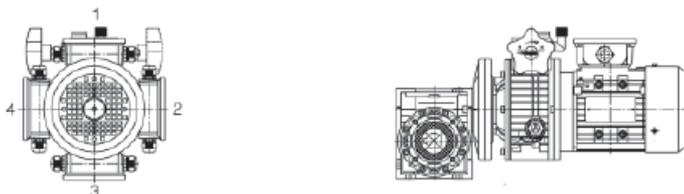
## 附件位置 / THE ATTACHMENT POSITION

NMRV...UDL...手轮位置 THE POSITION OF THE HAND WHEEL



注:如没有特别说明,手轮将按照如图1位和B3安装方位的组合方式提供。  
Note: if no special note, the handwheel will be in accordance with the figure 1 and B3 installation azimuth combination is provided.

NMRV...UDL...电机接线盒位置 MOTOR TERMINAL BOX POSITION



注:如对电机接线盒位置有特别要求,订购时须参考上图的要求指定接线盒方位,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 specified terminal box position, or junction box range according to installation position chart position is provided.

# > DIRECTIONS FOR USE

## 使用说明

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使用限制 / INSTALLATION

NMRV系列安装使用与保养 / NMRV INSTALLATION USAGE & MAINTENANCE

UDL系列安装使用与保养 / UDL INSTALLATION USAGE & MAINTENANCE

润滑油 / LUBRICATION

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订货须知 / NOTICE FOR ORDERING

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标准电机外形参考尺寸 / STANDARD MOTOR EXTERNAL REFERENCE DIMENSION

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## 使用限制 / INSTALLATION

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这本样本给出的参数基本上是按B3安装方位来编的，即第一级没有完全浸入油中。对于其他安装方位和输入转速，请参考下面表格中相应参数。当遇到下列应用情况时，如有必要请与我们技术服务人员联系。

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

避免将减速机部分或整台浸入水里或其他液体中。

减速器承受的最大负载扭矩不能超过两倍于性能参数表中规定的正常扭矩（当使用参数 $f_s = 1$ 时）：这里最大负载扭矩是指能承受瞬间短暂适度的过载，它出现在过载启动、刹车、振动或其他动态操作环境中。

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### CRITICAL APPLICATIONS

The performance given in the catalogue corresponding to mounting position B3 or similar, it means the first stage is not entirely immersed in oil. For other mounting positions and particular input speeds, refer to the tables that highlight different critical situations for each size of reduction unit. When faced with the following application, please contact our technical service if necessary.

- ① As a speed increasing.
- ② Applications with especially high inertia.
- ③ Use as a lifting winch. (Think about irreversibility)
- ④ Use in services that could be hazardous for people if the reduction unit fails.
- ⑤ Applications with high dynamic strain on the case of the reduction unit.
- ⑥ In places with a temperatures T under -5°C or over 40°C.
- ⑦ Use in chemically aggressive environments.
- ⑧ Use in a salty environments.
- ⑨ Use in radioactive environments.
- ⑩ Use in environments pressures other than atmospheric pressure.
- ⑪ Mounting positions not envisaged in the catalogue.

Avoid applications where even partial immersion of the reduction unit is required.

The maximum torque that the gear reducer can support must not exceed two times the nominal torque ( $f_s = 1$ ) stated in the performance tables. Intended for momentary overloads due to starting at full load, braking, shocks or other causes, particularly those that are dynamic.

安装减速机时要注意以下一些事项：

- ① 减速机与机械设备装配之前，要检查减速机输出轴的旋转方向是否正确。
- ② 减速机与原动机、设备装配之前，应检查各轴径、孔径、键和键槽的偏差尺寸，避免装配过紧、过松影响减速机性能。
- ③ 减速机必须牢固地安装在机械设备上，避免有松动或振动。
- ④ 尽可能地避免减速机暴露在烈日阳光下和恶劣环境中。
- ⑤ 如果减速机存放时间长达4 - 6个月，应检查油封是否浸润在润滑油中，可能油封唇口会粘在轴上，甚至失去了弹性，由于适当的弹性是油封必须的工作条件，所以推荐更换油封。
- ⑥ 所有橡胶件和透气孔不能沾有油漆。
- ⑦ 与减速机的空心轴配合连接时，应在轴上配合部分涂上润滑油，以免卡死或氧化。
- ⑧ 使用时必须检查油位（如油位镜孔或打开油塞，小型号是没有的）
- ⑨ 使用新减速机时，不能满负载起动，应该逐步增大负载。
- ⑩ 使用各类电机直联型减速器时，若电机重量偏大，应设支撑装置。
- ⑪ 确保电机风扇附近有良好的通风环境，以免影响散热效果。
- ⑫ 减速机的标准工作环境温度是 - 5℃至40℃，如果不在这范围时，请与我们联系。

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To install the reduction unit is necessary to note the following recommendations:

- ① Check the correct direction of the reduction unit output shaft before fitting the unit to the machine.
- ② Before mount with the prime mover and device, please check the reducer's every axial diameter, aperture, key and key slot, to be sure their dimension are not deviation, and avoid assembling too tight or too loose, unless it will influence the reducer's performance.
- ③ The mouting on the machine must be stable to avoid any vibration .
- ④ Whenever possible, protect the reduction unit against solar radiation and bad weather.
- ⑤ In the case of particularly lengthy periods of storage(4-6 months), if the oil seal is not immersed in the lubricant inside the unit, it is recommended to change it since the rubber could stick to the shaft or may even have lost the elasticity it needs to function properly.
- ⑥ Painting must definitely not go over rubber parts and the holes on the breather plugs, if any .
- ⑦ When connect with hollow or solid shaft, please grease the joint to avoid lock or oxidation.
- ⑧ Check the correct level of the lubricant through the indicator, if there is one.
- ⑨ Starting must take place gradually, without immediately applying the maxium load.
- ⑩ Supporting unit is required when using various of reducer matched with motor directiy and the good passage of the air from the fan side.
- ⑪ Ensure good ventilation environment near the motor fan, lest affect the cooling effect..
- ⑫ In the case of ambient temperatures <-5℃ or > +40℃ call the Technical Service.

- ① 轴伸形式全部为圆柱形，按《圆柱形轴伸》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 输出轴装联轴器或带轮时，用轴端螺孔压入，或加热装备，严禁捶打！
- ④ 机械无级变速器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，请勿再动！
- 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：

变速器采用四级电机时，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工作条件，但对部件的使用寿命并无有害影响。

- ⑧ 变速器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 变速器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 GB1569-1990 Cylindrical shaft extension. The key joint refers to GB1095-2003 Ordinary flat key.
- ② The shaft lines should be kept concentric when the coupling is connected 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 be 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 not turn the hand wheel of speed-regulation 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 regard to its temperature rise. In regard to its temperature rise please 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 environment. After running-in up to 60-80 hours, the temperature rise will go down gradually. From that time on, it is 20℃ higher than of environment, and the temperature will keep on rising stably. The high temperature rise in running will affect normal permissible working condition, 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 replaced, changing the lubricating oil every 5000 hours later.
- ⑩ The lubricating 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 oil level. 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 loosening!

## 润滑油 / LUBRICATION

### 工作环境温度不在表中范围内，请与我们联系。

当工作环境温度低于 -30°C 或高于 60°C 时，要使用特殊材质的油封。

当工作环境温度低于 0°C 时，必须考虑下列情况：

- ① 选用的电机必须在低温下能正常工作。
- ② 如果减速机箱体的材质是铸铁，在温度 -15°C 以下时，箱体变得很脆，要注意尽量避免撞击。
- ③ 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 10,000 小时后，应更换润滑油，换油频率按减速机实际运行情况和环境温度条件而定。

- 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，请与我们联系。
- 减速机 NMRV110、130 和 150 规格在出厂时已加注了矿物润滑油 (SHELL Omala OIL 460)。
- 无级变速器在出厂时也加注了矿物润滑油 (广研 Ub-3x)。
- 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。
- NMRV 系列的减速机，在特定的工作环境，需配排气阀 (可选配件)。
- PC 已加注了耐用的合成油润滑油 (SHELL TEVELA OIL 320)，因此能够安装任何方位。

### In cases of ambient temperature not envisaged in the table, call our Technical Service.

In the case of temperature -30°C or over 60°C. It is necessary to use oil seals with special material.

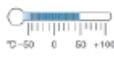
For operating ranges with temperatures under 0°C. It is necessary to consider the following.

- ① The motors need to be suitable for operation at the envisaged ambient temperature.
- ② 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°C.
- ③ 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 few minutes of rotation under no load.

The oil needs to be changed after approximately 10,000 hours. This period depends on the type of service and the environment where the reduction unit works.

- 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 our Technical Service to assess the conditions of use.
- The reduction units size 110 and 130 are supplied complete with lubricant, mineral oil, (SHELL TEVELA OIL 320)
- The variator speed are supplied complete with lubricant, mineral oil (GUANGYAN Ub-3x)
- For sizes 110 and 130 it is necessary to specify the position, otherwise the reduction units are supplied with the quantity of oil relating to pos. B3.
- NMRV series worm gearbox should mount breather plug (optional parts) under special working condition.
- PC is supplied complete with long-life lubricant, synthetic oil (SHELL TEVELA OIL 320), and can therefore be mounted in all the positions.

### 润滑油选用表 / LUBRICANTS OIL CHOSEN TABLE

		ISO	SHELL	AGIP	ESSO	MOBIL	CASTROL	BP	广研	
NMRV025~090 PC063~090	-20 ~ +50	VG320	Tivela OIL S320	Telium VSF320	S220	Glygoyle 30	Alphasyn Pg320	Energol SG-XP320		合成油 Synthetic oil
NMRV110~150	-5 ~ +40	VG460	Omala OIL460	Blasia 460	Spartan Ep460	Mobilgear 634	Alpha MAX 460	Energol GR-XP460	CKE460	矿物油 Mineral oil
	-15 ~ +25	VG220	Omala OIL220	Blasia 220	Spartan Ep220	Mobilgear 630	Alpha MAX 220	Energol GR-XP220		
UDL	-20 ~ +40	Vg32	A.T.F.DXRON	A.T.F.DXRON	A.T.F.DXRON	A.T.F.220	TQ.DXRONII	Autran DX	Ub-3x	矿物油 Mineral oil

## 润滑油加注量 / LUBRICANT FILL QUANTITY

型号 \ 安装方位	B3	B8	B6、B7	V5、V6
NMRV025	0.02			
NMRV030	0.042			
NMRV040	0.081			
NMRV050	0.153			
NMRV063	0.30			
NMRV075	0.58			
NMRV090	1.02			
NMRV110	3.02	2.25	2.55	3.02
NMRV130	4.55	3.35	3.55	4.55
NMRV150	7	5.1	5.4	5.4
PC063	0.05			
PC071	0.07			
PC080	0.15			
PC090	0.16			
型号 \ 安装方位	B3、B5	V3、V6	V1、V5	
UDL002	0.13		0.15	
UDL005	0.23		0.33	
UDL010	0.33	0.43	0.6	
UD020	0.8		1	
UD030S/L	1.2		1.2	

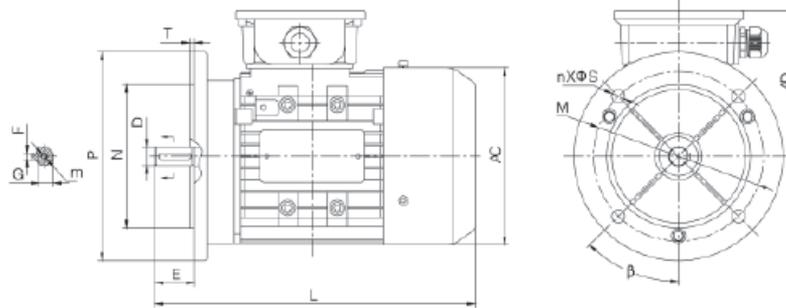
表格规定的加注量为参考值，准确值的变化与传动比和安装方式有关。

The fill quantity in the table is referenced, the exact value relating to the ratio and mounting positions.

## 订货须知 / NOTICE FOR ORDERING

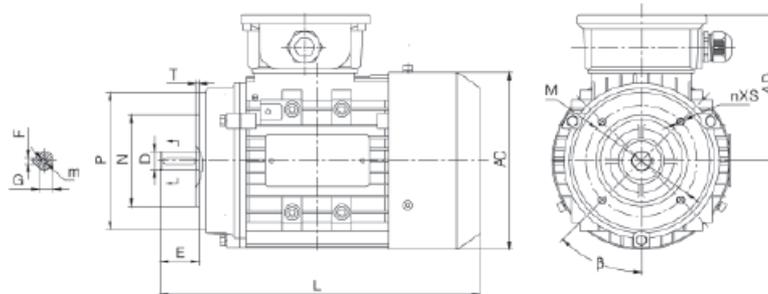
- ① 订货时请根据使用需要的转速范围，输出转矩，结构形式，对照性能参数、尺寸表、安装和操作方位图，合理选择机型，写明型号标记（下单时是否带电机请说明，一般按不带电机供应）。订货时选择的安装方位应与安装方法一致，不然容易造成漏油，影响使用寿命，若安装方位特殊请另加说明。
  - ② 订货时请尽量选择本目录内的标准产品，如有特殊要求或配用特殊电机请附加说明。
- ① Please refer to the sheet of performance parameter, NMRV series dimensions, Mounting and operation positions diagram, make reasonable choice of model, and write down model mark to your required revolution scope, output torque and structural from on ordering (when ordering, you should show whether the reducers are equipped with motors, otherwise reducers aren't with motors)
  - ② Please make the best choice of standard products in this catalogue, and give an additional explanation for your special requirement and motors.

# 标准电机外形参考尺寸 / STANDARD MOTOR EXTERNAL REFERENCE DIMENSION



B5型机座安装型式(B5 MOUNTING POSITION)

机座号 Frame size	电机极数 Motor power			外型尺寸 Forfilomtry					安装尺寸 Mounted size				轴伸尺寸 Shaft extension					
	2P	4P	6P	AC	AD	L	P	N	T	M	S	β	E	F	D	G	m	
	电机功率 Motor poles (KW)																	
56	0.09 0.12	0.09 0.09		113	96	199	120	80	3.0	100	7(n=4)	45°	20	3	9	7.2	M4X12	
63	0.18 0.25	0.12 0.18	0.09 0.12	120	102	217	140	95		115	10(n=4)		23	4	11	8.5		
71	0.37 0.55	0.25 0.37	0.19 0.25	136	109	245	160	110	130	10(n=4)	30		5	14	11	M5X12		
80	0.75 1.10	0.55 0.75	0.37 0.55	155	124	287			3.5	165	12(n=4)		40	6	19	15.5	M6X16	
90S	1.5	1.1	0.75	175	137	310	200	130	4.0	215	15(n=4)	45°	50	8	24	20	M8X19	
90L	2.2	1.5	1.1			335												
100L	3	2.2	1.5	195	151	383	250	180		265	15(n=4)		60		28	24	M10X22	
112M	4	4.0	2.2	219	169	401				5.5	265		15(n=4)	80	10	38	33	M12X28
132S	5.5	5.5	3.0	258	188	475	300	230	5.0	300	19(n=4)	45°	110	12	42	37	M16X36	
132M	7.5	7.5	4.0			513												
160M	11	11	7.5	315	242	609	350	250		300	19(n=4)		45°	110	12	42	37	M16X36
160L	18.5	15	11			653												



B14型机座安装型式(B14 MOUNTING POSITION)

机座号 Frame size	电机极数 Motor power			外型尺寸 Forfilomtry					安装尺寸 Mounted size				轴伸尺寸 Shaft extension					
	2P	4P	6P	AC	AD	L	P	N	T	M	S	β	E	F	D	G	m	
	电机功率 Motor poles (KW)																	
56	0.09 0.12	0.09 0.09		113	96	199	80	50	2.5	65	M5(n=4)	45°	20	3	9	7.2	M4X12	
63	0.18 0.25	0.12 0.18	0.09 0.12	120	102	217	90	60		75	M5(n=4)		23	4	11	8.5		
71	0.37 0.55	0.25 0.37	0.19 0.25	136	109	245	105	70	85	M6(n=4)	30		5	14	11	M5X12		
80	0.75 1.10	0.55 0.75	0.37 0.55	155	124	287	120	80	3.0	100	M6(n=4)		40	6	19	15.5	M6X16	
90S	1.5	1.1	0.75	175	137	310	140	95	3.5	115	M8(n=4)	45°	50	8	24	20	M8X19	
90L	2.2	1.5	1.1			335												
100L	3	2.2	1.5	195	151	363	160	110		130	M8(n=4)		60		26	24	M10X22	
112M	4	4.0	2.2	219	169	401				5.5	165		M10(n=4)	80	10	38	33	M12X28
132S	5.5	5.5	3.0	258	188	475	200	130	4.0	215	M12(n=4)	45°	110	12	42	37	M16X36	
132M	7.5	7.5	4.0			513												
160M	11	11	7.5	315	242	609	250	180		215	M12(n=4)		45°	110	12	42	37	M16X36
160L	18.5	15	11			653												