



国家高新技术企业

National High-tech Enterprise

国家级火炬计划企业

National Torch Programme

National Torch Plan Enterprise

+++ 2021/C

浙江午马减速机有限公司  
ZHEJIANG WUMA REDUCER CO.,LTD.

浙江省温州市鹿城区轻工产业园区创强路10号  
No.10 Chuangqiang Road, Light Industry Zone,  
Lucheng District, Wenzhou, Zhejiang, China 325019

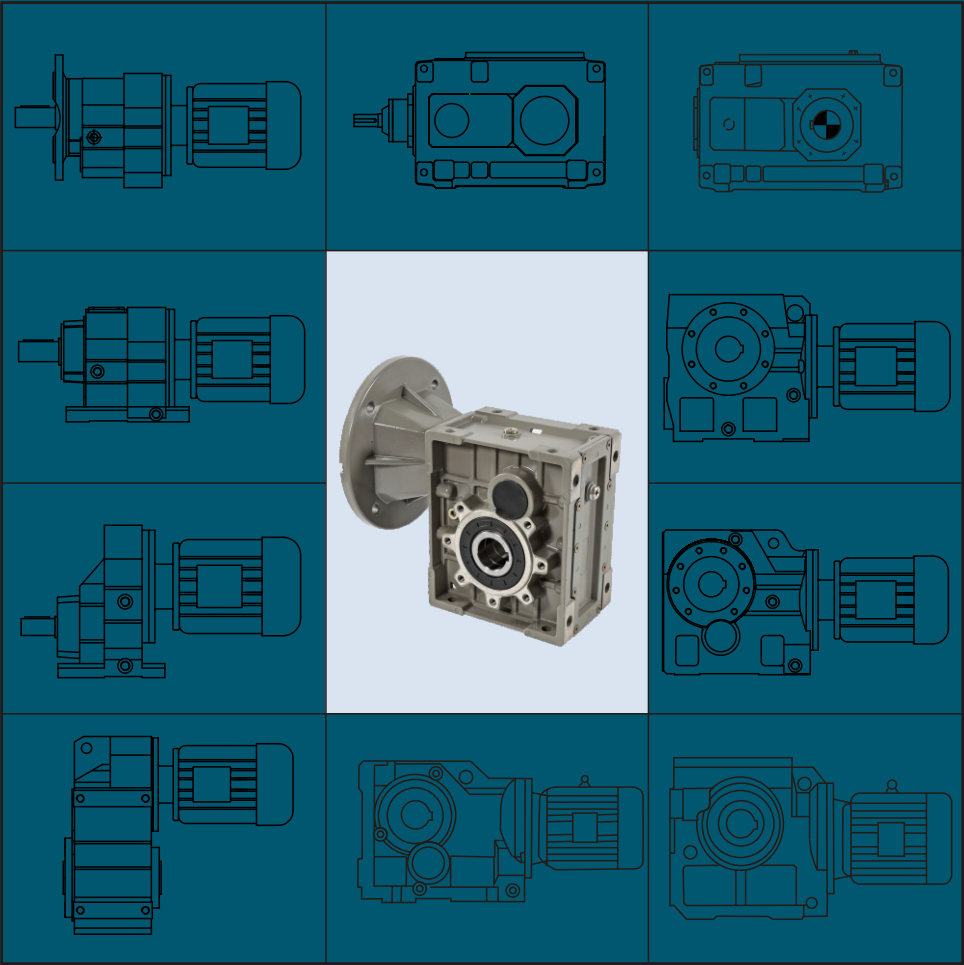
www.zjwuma.com

销售部：  
Domestic Sale Department:

电话：(0577) 86527211    86527178    86527111  
传真：(0577) 86527090  
邮箱：wuma@zjwuma.com  
zjwuma@zjwuma.com

外贸部：  
Foreign Trade Department:

Tel: (0577) 88134158    85956223  
Fax: (0577) 88134158  
E-mail: wuma@zjwuma.com  
zjwuma@zjwuma.com



浙江午马减速机有限公司 WUMA REDUCER



董事长吕锦弟随前国家主席胡锦涛赴加拿大/美国参加经济贸易活动  
Mr Lu Jin Di,director General of wuma,accompanying chairman Hu jin tao visiting in USA and Canada

## Transmission Miracle Corporation Honour 传动奇迹之企业荣誉

By looking for quality products, our inspection is appraised as HIGH STRICT, therefore, we received below honors and reputation from market, they are the driving force for us to keep work harder.

唯有对产品质量的不断追求，我们的质量检测在业内公认为“苛刻”，唯其如此，我们才有了如此诸多的殊荣。当然，社会各界的认同不会成为我们骄傲的原因，因为他只能作为我们前进的进力。

## Introduction

Zhejiang Wuma Reducer Co., LTD. is a transmission and driving machinery company who specializing in research, development and production of various speed reducers and variators etc. It is a member of China Speed Reducer and Variator Industrial Association.

Since our establishment, we have insisted on science and technology innovation, researching and importing advanced technology, as well as continuously developing new products to meet the market requirement. The main products are RV series worm gearbox, MB, MBN series planetary cone-disk variator, WR ,WK ,WF series helical gear reducer, WS series helical-worm gear reducer, WH/WB series gear reducer and the multi-function polyhedron hard teethface combination reducer, WKM hypoid helical reducer, precision worm gearbox etc, more than ten series products with thousands of specifications universal products. We can also provide customized products. The products are featured with serialized and modularized advantages, and have been widely used in the transmission and driving fields for all types of industries. Such as food packing, bear, beverage, environmental protection, metallurgy, storage transportation, crane, conveyer, tobacco light industry, solid packing, rubber and plastic industry and so on.

Our company has advanced gear grinders, machining center and inspection center, as well as universal tool microscope etc. testing and machining equipment. We have an annual production capacity of 100,000 sets of reducers.

Aimed at "creative development, innovation, quality priority and creditability," our company always supplies reliable products to customers. We manufacture according to the ISO9001:2000 quality control system, we passed quality system certificate. GB/T28001-2001 occupational healthy and safety management system certificate, ISO14001:2004, GB/T 24001-2004 Environmental management system certificate, good standardizing practice certificate as well as certification for ability confirmation of inspection measurement and test. In 2012, we were honored by "National High-tech enterprise". In 2001, we obtained self-operating import and export qualification certificate. The products have been widely used all over China and exported to Europe, America, HongKong, Taiwan, South America and Southeast Asia etc.In 2007 we were received "Provincial High-tech Enterprise and technology researching and developing center, 2008 we became "National Torch Program Enterprise", and in the year of 2012, we were honored by "National High-Tech Enterprise "

Our company was located coastal economic area Wenzhou, Zhejiang province, we can provide on time delivery and great service to our customer with the support from our sale branch around China, such as Beijing, Tianjian, Shanghai, Foshan, Wuxi, Ningbo, Wuhan, Qingdao, Zibo, Chengdu, Changsha, Chongqin, Hefei, Guangzhou, Quanzhou and so on.





## About Transmission

### 公司简介

浙江午马减速机有限公司是研制、生产各类减速机、无级变速机等传动、驱动机械的专业化公司，是中国减、变速行业协会会员。

公司自创立至今，坚持科技创新、研究和引进先进技术，不断开发、研制市场需求的产品。现主要生产RV系列蜗轮蜗杆减速机，MB、MBN系列行星锥盘无级变速机，WS系列齿轮-蜗杆减速机，WR、WF、WK系列硬齿面圆柱齿轮减速机，X、B系列摆线针轮减速机，WB微型摆线减速机，WH/WB系列大功率齿轮减速机，多功能多面体硬齿面组合减速机，WAH系列准双曲面齿轮减速机，精密蜗轮蜗杆减速机等十余个系列、数千种规格的通用产品。并为用户提供特殊、专用产品。产品具有系列化、模块化优点，广泛应用于食品包装、啤酒饮品、环保工程、冶金矿山、仓储物流、起重输送、烟草轻工、立体停车、橡胶塑料等行业的传动、驱动领域。公司拥有国内外先进的磨齿机、高精度的数控机床和加工中心以及齿轮检测中心、三坐标测量仪等加工和检测设备，具有年产10万台减速机的生产能力以及强劲的技术实力。

“锐意进取，努力创新，质量第一，信誉为本”，向用户提供可信性的产品是公司的宗旨。公司通过ISO9001:2000质量管理体系认证，GB/T28001-2001职业健康安全管理体系认证，ISO14001:2004，环境管理体系认证，计量检测确认合格证书，标准化良好行为证书。2001年公司又获得了企业自营进出口资格证书。现公司产品遍及全国，出口欧、美、港、台、东南亚等国家及地区。历年被农行省分行授予“AAA级资信企业”，被鹿城区人民政府授予“首批百家诚信企业，名牌产品”，2007年被评为“浙江省高新技术企业”及“技术开发研究中心”，2008年被评为“国家级火炬计划企业”，2012年被评为“国家级高新技术企业”。

公司地处沿海经济带浙江省温州市，国内在北京、天津、上海、佛山、无锡、宁波、武汉、青岛、淄博、成都、长沙、重庆、合肥、广州、泉州等各地设有经营办事处为尊敬的用户朋友提供及时、满意的服务。



# Transmission Foundation Facilities and Strength

## 传动基础之企业实力

Our company have high precision computerized lathe and machining center, advanced equipment and inspection measurements, well-round and skillful technology as well as restrict quality control management. In gathering of high-educated and advanced technology team which could ensure stable quality products by new technique, new materials, and new machining methods. And at the same time, also they are the source for innovation.

拥有高精度的数控机床和加工中心，先进的设备及检测仪器，精良的工艺以及严格完善的质量管理体系，并聚集具有专业技术精英和领先水平的科技队伍，充分利用新技术、新工艺、新材料保证产品的稳定性和可靠性。产品质量取源于制造手段的先进、精品意识源于不断的创新。



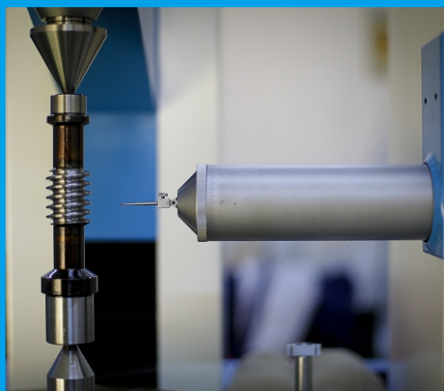


# Transmission Foundation Research and Development

## 传动基础之企业研发

In the begining of our career,qaulity is our only objective,more investment has been injected with upgrade equipments,we do believe no well-round equipment,no well-round quality guarantee.

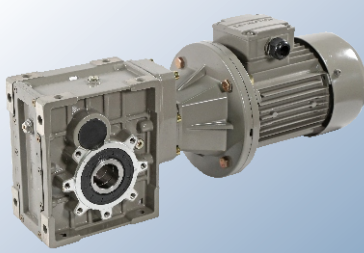
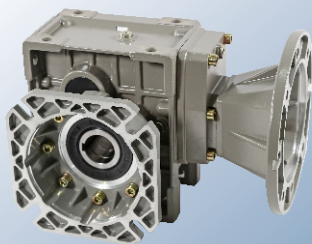
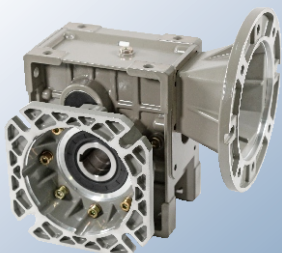
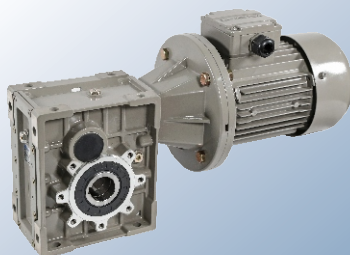
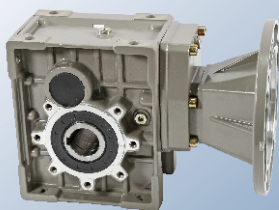
艰苦创业，只能发扬其精神，我们从创业伊始便将产品质量作为不懈追求的目标，所以我们在硬件配置方面不遗余力，我们深信没有过硬的硬件配置就不会有过硬的产品质量。





WKM50 ~ 90

# 准双曲面齿轮减速机 HYPOID GEAR REDUCER



## 目录 CONTENTS

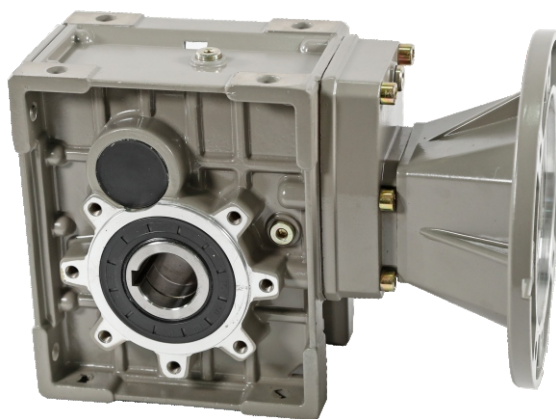
### Page

|       |                   |                                          |
|-------|-------------------|------------------------------------------|
| 3     | ► 概述              | SUMMARIZE                                |
| 4-5   | ► 产品结构图           | PRODUCT STRUCTURE PICTURE                |
| 6-8   | ► 型号说明            | MODEL ILLUMINATE                         |
| 9-13  | ► 型号相关参数          | RELEVANT PARAMETER                       |
| 14    | ► 选型举例            | SELECTION EXAMPLE                        |
|       | ◀ 减速器选型表          | GEAR UNIT SELECTION TABLES               |
| 15-16 | ► 减速器组合表          | POSSIBLE GEOMETRICAL COMBINATIONS        |
| 17-32 | ► WKM 性能参数表       | WKM PERFORMANCE PARAMETER                |
|       | ◀ 外形尺寸图表          | OUTLINE DIMENSION SHEET                  |
| 33-40 | ► WKM... 外形尺寸     | WKM.. OUTLINE DIMENSION                  |
| 41    | ► WKMS<br>轴输入外形尺寸 | WKMS<br>OUTLINE DIMENSION OF SHAFT INPUT |
| 41-42 | ► 附件              | ACCESSORIES                              |
| 42    | ► 旋转方向            | DIRECTION OF ROTATION                    |
| 43    | ► 安装              | INSTALLATION                             |
| 44    | ► 安装方法            | INSTALLATION METHODS                     |
|       | ◀ 润滑油             | LUBRICANTS                               |
| 45    | ► 润滑油型号           | TYPES OF LUBRICANTS                      |
| 45    | ► 润滑剂加注量          | LUBRICANT VOLUME                         |
| 46    | ► 维护              | MAINTENANCE                              |
| 47    | ► 存放              | STORAGE                                  |
| 47    | ► 定货须知            | NOTICE FOR ORDER                         |
| 48    | ► 运转故障            | MULFUNCTIONS                             |
| 49-50 | ► 减速器负载特征表        | CHARGE CHARACTERISTIC CHART              |

产品图片 / PRODUCT PICTURE



WKM50B~90B



WKM50C~90C

## 1. 概述 SUMMARIZE

### 1.1 产品特点 Products characteristics

- ①. 方箱外形，优质铝合金压铸箱体，美观大方。
- ②. 散热性能优良，承载能力大。
- ③. 多面安装、空心输出轴结构，另配有各种输入、输出方式、并能方便的与其它传动机械组合，适应性强。
- ④. 机型小巧、结构紧凑，体积小、重量轻，节省安装空间。
- ⑤. 传动平稳、噪音小。
- ⑥. 安全可靠、经济耐用。

- ①. High quality Aluminum alloy, appearance elegant.
- ②. Good heat dissipation capacity, high carrying ability.
- ③. Installed in multi-surfaces, hollow output shaft, various input and output type, connect with other transmission machinery easily.
- ④. Small size, compact structure, light weight and output type, conjoin other transmission machinery easily.
- ⑤. Run steadily and low noise.
- ⑥. High reliability and high efficiency.

### 1.2 主要零件的技术方法 Technical method of main parts

- ①. 压铸箱体，三维设计有限元分析，铝合金压铸在保证加工精度的同时，提高箱体的强度与刚度；
  - ②. 齿轮：20CrMnTi，渗碳淬火，磨齿精度达6级以上，齿形、齿向修形，提高减速机的承载能力及啮合的平稳性。
- 
- ①. Die-casting Housing, 3D design with analysis, aluminum alloy die-casting could make sure processing precision, as well as strongness and rigidity of housing ;
  - ②. helical Gear :20CrMnTi, carbonize & quencher heat treatment, precision level of gear grinding could reach above 6 grade, correction of gear shape and tooth curve, which could enhance the bearing capacity and stability of mesh.

### 1.3 壳体表面处理 Surface painting

铝合金外壳：

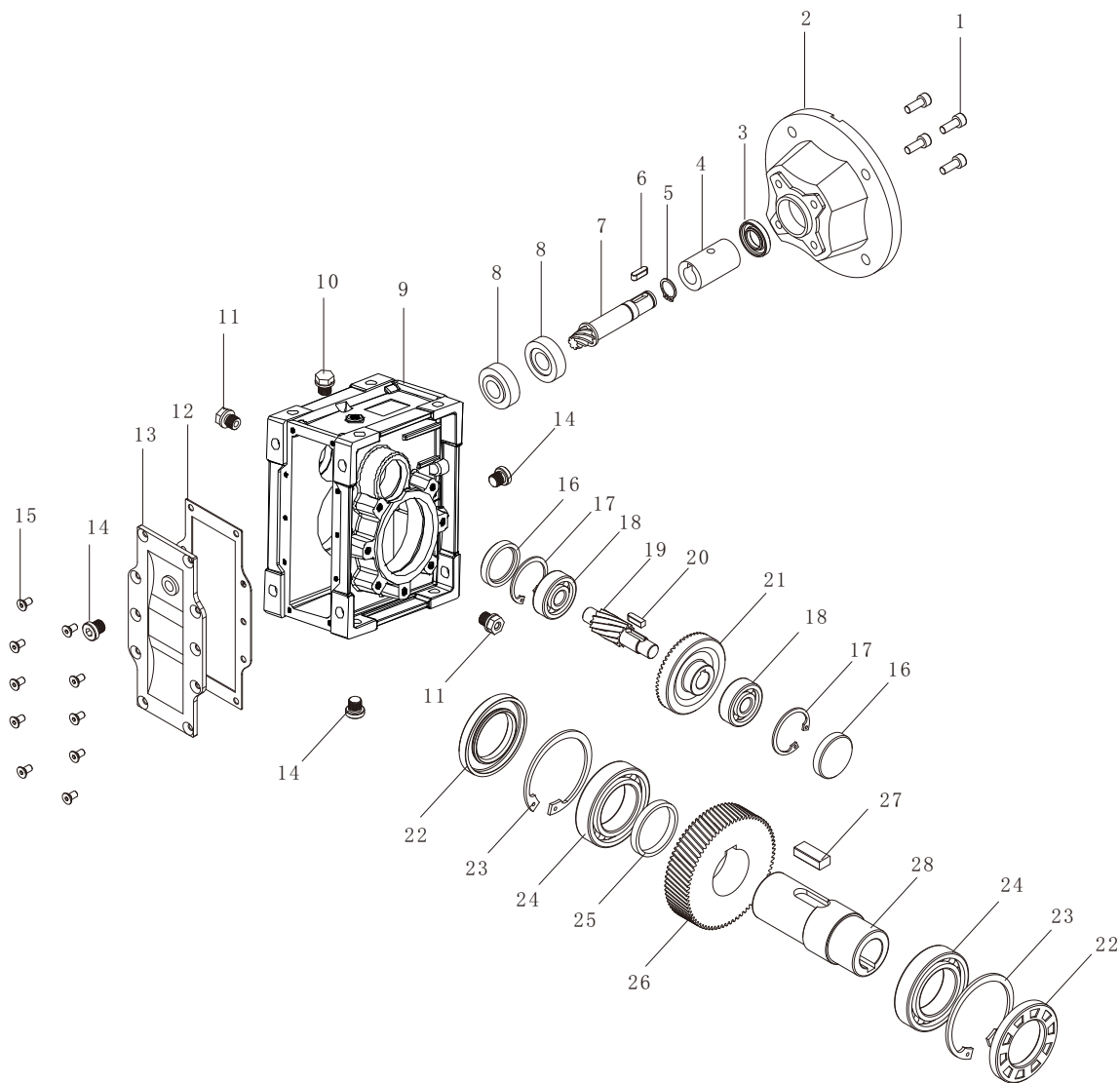
- ①. 壳体压铸后喷丸处理，保证表面光洁；
- ②. 钝化处理后喷塑，美观且提高耐腐蚀性。

Aluminum alloy housing:

- ①. Shot blasting on the surface, after die-casting of housing.
- ②. Make plastic spray coating after passivation treatment on housing, which looks good and enhance corrosion resistance.

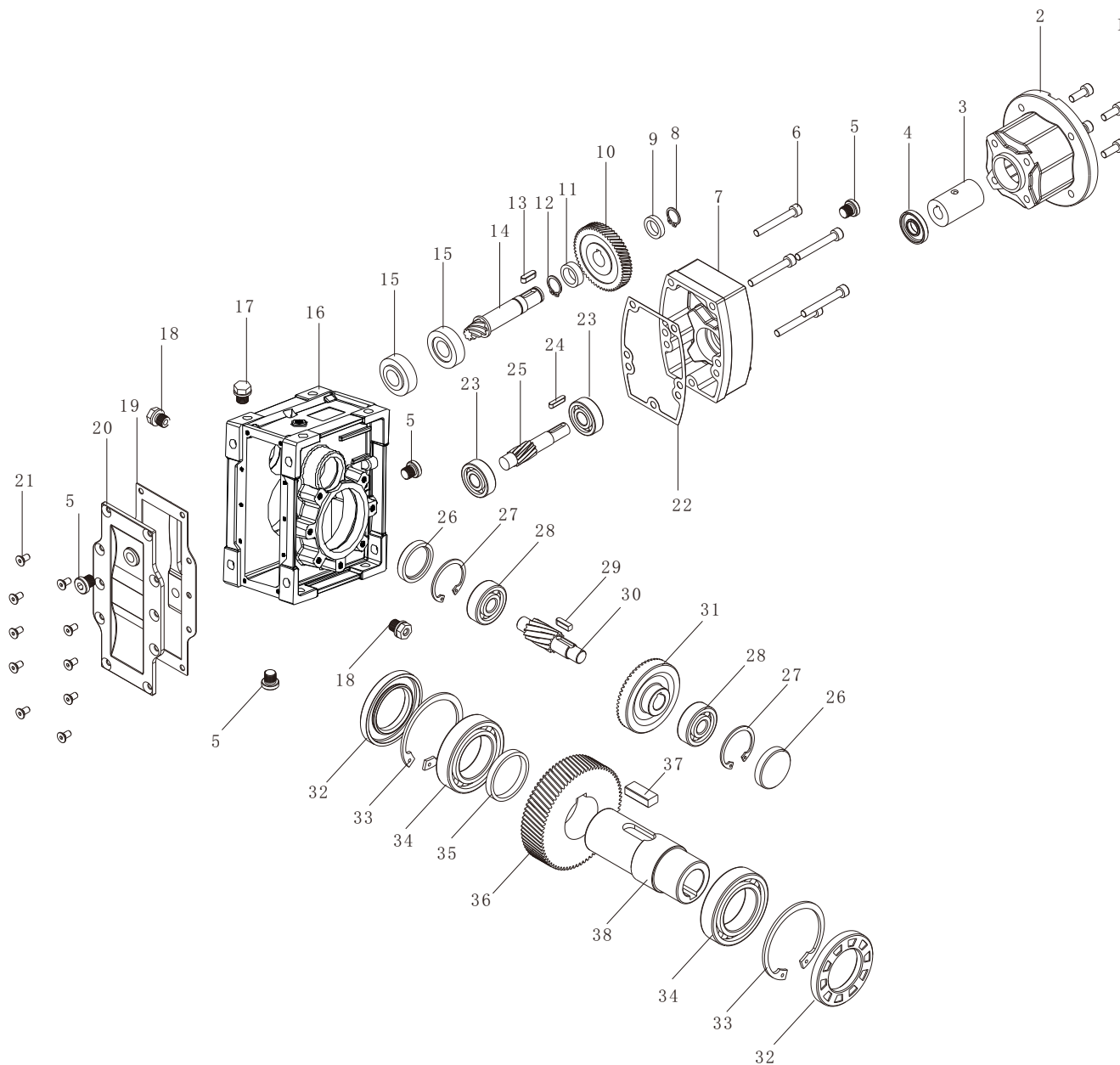
2. 产品构造原理 / Basic structure

2.1. WKM...B 结构图/ WKM...B Basic structure



|                                 |                          |  |
|---------------------------------|--------------------------|--|
| 1 内六角螺钉 / Inner hex screw       | 16 密封端盖 / Seal cover     |  |
| 2 输入法兰 / Intput flange          | 17 孔用挡圈 / Hole-circlip   |  |
| 3 油封 / Oil seal                 | 18 轴承 / Bearing          |  |
| 4 输入轴套 / Intput adaptor         | 19 齿轮轴 / Gear shaft      |  |
| 5 轴用挡圈 / Shaft-circlip          | 20 键 / Key               |  |
| 6 键 / Key                       | 21 齿轮 / gear             |  |
| 7 齿轮轴 / Gear shaft              | 22 油封 / Oil seal         |  |
| 8 轴承 / Bearing                  | 23 孔用挡圈 / Hole-circlip   |  |
| 9 箱体 / Housing                  | 24 轴承 / Bearing          |  |
| 10 通气帽 / Breather               | 25 定距环 / Distance collar |  |
| 11 油镜塞 / Oil plug               | 26 齿轮 / gear             |  |
| 12 橡胶垫 / Rubber gasket          | 27 键 / Key               |  |
| 13 后盖 / Cover                   | 28 输出轴 / Hollow shaft    |  |
| 14 放油塞 / Oil drain plug         |                          |  |
| 15 内六角沉头螺钉 / Hexagon sunk screw |                          |  |

## 2.2. WKM...C 结构图/ WKM...C Basic structure



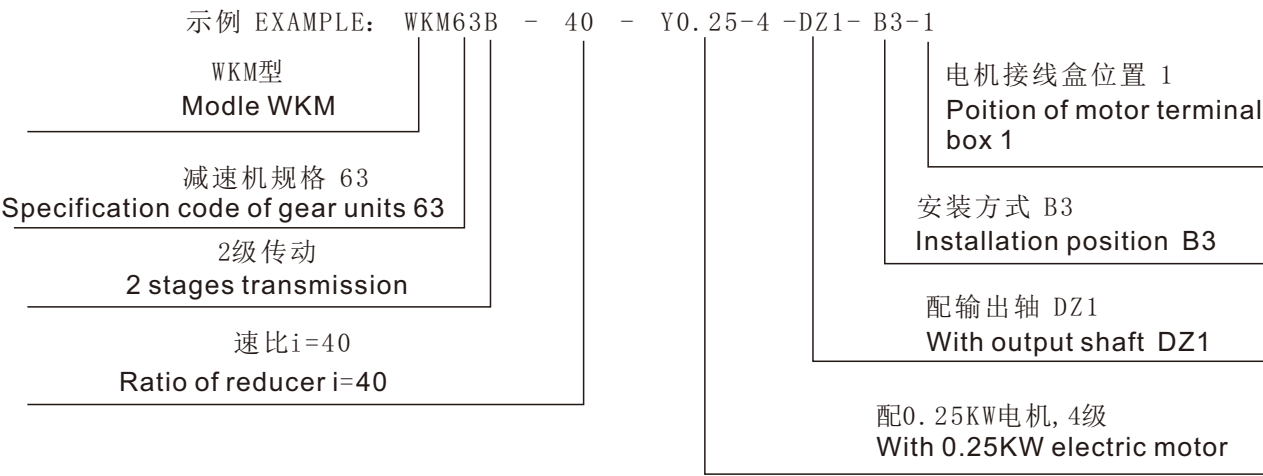
|                               |                                 |                          |
|-------------------------------|---------------------------------|--------------------------|
| 1 内六角螺钉 / Inner hex screw     | 16 箱体 / Housing                 | 31 齿轮 / gear             |
| 2 输入法兰 / Input flange         | 17 通气帽 / Breather               | 32 油封 / Oil seal         |
| 3 输入轴套 / Input adaptor        | 18 油镜塞 / Oil level plug         | 33 孔用挡圈 / Hole-circlip   |
| 4 油封 / Oil seal               | 19 橡胶垫 / Rubber gasket          | 34 轴承 / Bearing          |
| 5 放油塞 / Oil drain plug        | 20 后盖 / Cover                   | 35 定距环 / Distance collar |
| 6 内六角螺钉 / Inner hex screw     | 21 内六角沉头螺钉 / Hexagon sunk screw | 36 齿轮 / gear             |
| 7 输入法兰座 / Input flange holder | 22 密封纸垫 / Housing gasket        | 37 键 / Key               |
| 8 轴用挡圈 / Shaft-circlip        | 23 轴承 / Bearing                 | 38 输出轴 / Hollow shaft    |
| 9 定距环 / Distance collar       | 24 键 / Key                      |                          |
| 10 齿轮 / gear                  | 25 齿轮轴 / Gear shaft             |                          |
| 11 定距环 / Distance collar      | 26 密封端盖 / Seal cover            |                          |
| 12 轴用挡圈 / Shaft-circlip       | 27 孔用挡圈 / Hole-circlip          |                          |
| 13 键 / Key                    | 28 轴承 / Bearing                 |                          |
| 14 齿轮轴 / Gear shaft           | 29 键 / Key                      |                          |
| 15 轴承 / Bearing               | 30 齿轮轴 / Gear shaft             |                          |

3. 标记方式 / Model designation

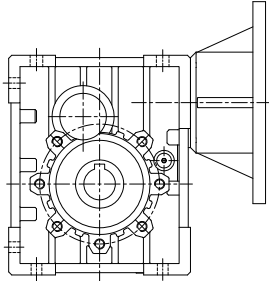
WKMS 50 B - 12.5 - Y0.25-4 or 71B5- DZ1 -B3-1

| No | 说 明                                                                  | Comments                                                                                                       |
|----|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1  | 1. WKM:带输入法兰式减速机<br>2. WKMS:输入轴式减速机                                  | 1.WKM:With input flange<br>2.WKMS:With input shaft                                                             |
| 2  | 减速机规格代号:50、63、75、90                                                  | Specification code of gear units 50 63 75 90                                                                   |
| 3  | 1. B: 表示2级传动<br>2. C: 表示3级传动                                         | 1.B:Means 2 stages<br>2.C:Means 3 stages                                                                       |
| 4  | 减速机速比: i=12.5                                                        | Reducer Ratio: i=12.5                                                                                          |
| 5  | 1. 配输入法兰, 配电机:Y0.25-4<br>2. 配输入法兰, 不配电机:71B5                         | 1.With input flange and electric motor: Y0.25-4<br>2.With input flange,without electric motor:71B5             |
| 6  | 1. 配输出轴:DZ1, DZ2, SZ<br>2. 配输出法兰:FA1, FA2<br>3. 配扭力臂:TA1, TA2 (见第7页) | 1.With output shaft:DZ1, DZ2, SZ<br>2.With output flange:FA1, FA2<br>3.With torque arm:TA1, TA2 ( see page 7 ) |
| 7  | 安装方位代号 (见第8页)                                                        | Installation position code ( see page 8 )                                                                      |
| 8  | 电机接线盒位置 (见第8页)                                                       | Position of motor terminal box ( see page 8 )                                                                  |

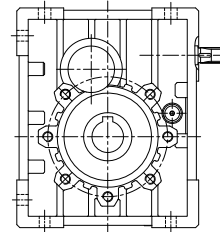
订单时请说明是否带电机，一般按不带电机供应。  
when ordering, you should show whether the reducers are equipped with motors, otherwise reducers aren't supplied with motors.



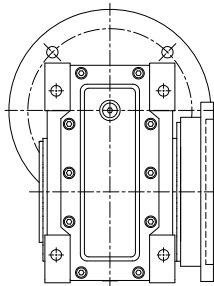
WKM. ....



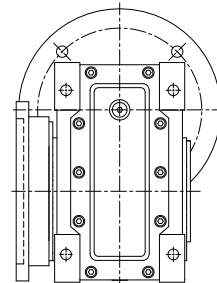
WKMS. ....



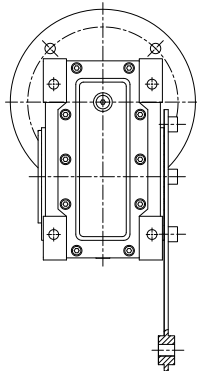
WKM. .... FA1



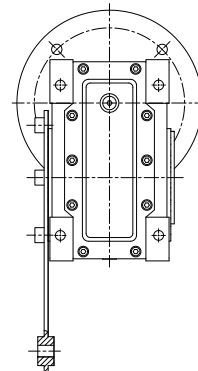
WKM. .... FA2



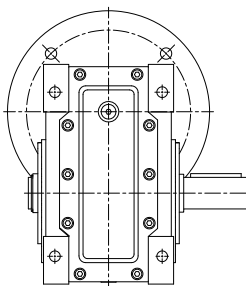
WKM. .... TA1



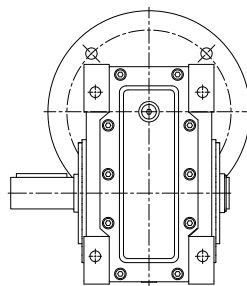
WKM. .... TA2



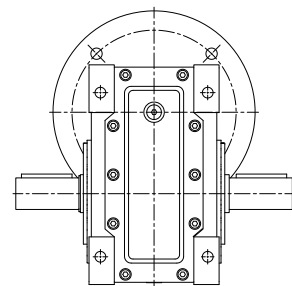
WKM. .... DZ1



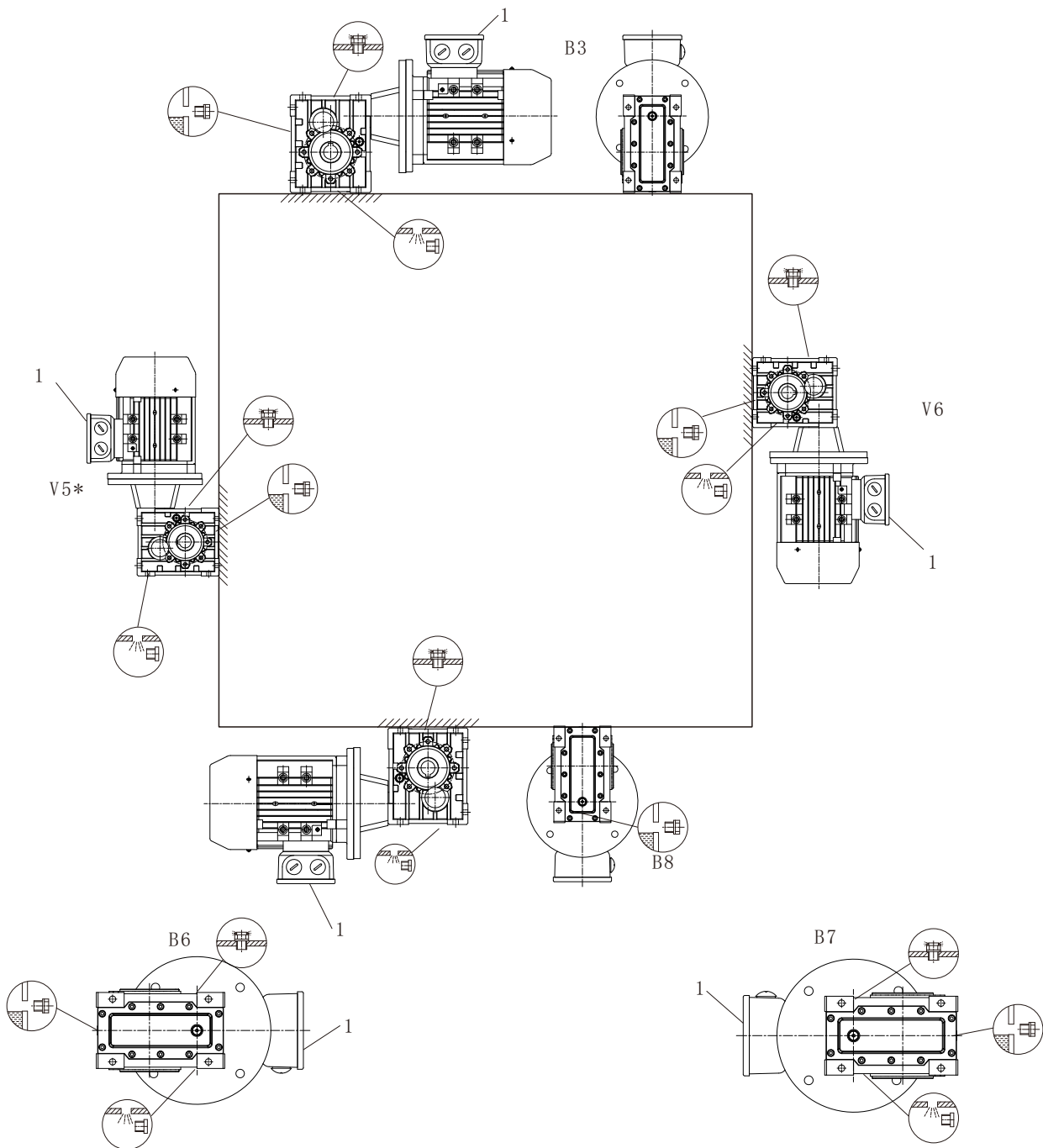
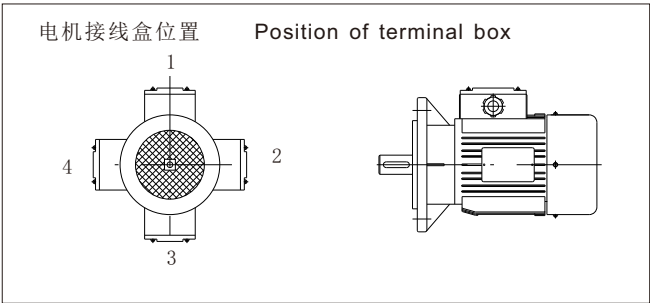
WKM. .... DZ2



WKM. .... SZ



| 符号<br>Symbol | 含义<br>Meaning         |
|--------------|-----------------------|
|              | 通气帽<br>Breather       |
|              | 油镜塞<br>Oil mirror     |
|              | 放油塞<br>Oil drain plug |



\*:表示在此安装方式，不能仅凭油镜塞加注润滑油，油位需高出油镜塞，加注量按表内所示。  
\*:It means the lubricant can't be added only according to the oil level of mirror, but also higher than it, the fill quantity as shown in the table.

## 4. 选型相关参数

### 4.1 功率 P

$$P_1 = \frac{P_2}{\eta} \quad [\text{kW}]$$

$$P_{1n} \geq P_1 \quad [\text{kW}]$$

|          |        |
|----------|--------|
| $P_1$    | 输入功率   |
| $P_2$    | 输出功率   |
| $P_{1n}$ | 电机额定功率 |
| $\eta$   | 传动效率   |

WKM系列减速器的效率是根据传动级数确定，2级传动效率  $\eta$  为92%，3级传动效率  $\eta$  为90%。

### 4.2 转速 n

|       |         |
|-------|---------|
| $n_1$ | 减速器输入转速 |
| $n_2$ | 减速器输出转速 |

本系列减速机的额定输入转速为1400r/min, 建议用户在1400r/min或者更低的转速下使用; 允许在较高的输入转速条件下使用, 但在这种情况下, 额定扭矩 $M_2$ 会有所下降。

### 4.3 传动比 i

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

传动比通常为小数, 在选型表中保留两位小数。

### 4.4 扭矩 M

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \quad [\text{Nm}]$$

$$M_{2\text{MAX}} \geq M_2 \cdot f_s \quad [\text{Nm}]$$

|                   |          |
|-------------------|----------|
| $M_2$             | 输出扭矩     |
| $M_{2\text{MAX}}$ | 最大允许输出扭矩 |
| $P_1$             | 输入功率     |
| $\eta$            | 传动效率     |
| $f_s$             | 工况系数     |

### 4.5 使用系数

使用减速器时, 应考虑一定的使用系数。 $f_s$ 为工况系数, 它是根据每天的运转时间和启停频率Z, 及负载类型确定的。

$f_B$ 为使用系数, 它是根据减速机承载能力计算出来的。

选型时需满足:

$$f_B \geq f_s$$

## 4. RELEVANT PARAMETER

### 4.1 Power P

$$P_1 = \frac{P_2}{\eta} \quad [\text{kW}]$$

$$P_{1n} \geq P_1 \quad [\text{kW}]$$

|          |                         |
|----------|-------------------------|
| $P_1$    | Input power             |
| $P_2$    | Output power            |
| $P_{1n}$ | Rated power of motor    |
| $\eta$   | Transmission efficiency |

The efficiency of WKM gear units varies with the number of gear stages, between 92 % (2-stage), 90%(3-stage).

### 4.2 Rotation speed n

|       |                         |
|-------|-------------------------|
| $n_1$ | Input speed of reducer  |
| $n_2$ | Output speed of reducer |

If driven by the external equipment, 1400r/min or lower rotation speed is suggested to be used in order to optimize the working conditions and prolong the service life. Higher input rotation speed is permitted, but in this case, the rated torque  $M_2$  will be reduced.

### 4.3 Transmission ratio i

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

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

### 4.4 Torque M

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \quad [\text{Nm}]$$

$$M_{2n} \geq M_2 \cdot f_s \quad [\text{Nm}]$$

|                   |                                     |
|-------------------|-------------------------------------|
| $M_2$             | Output torque                       |
| $M_{2\text{MAX}}$ | Max. permissible output torque [Nm] |
| $P_1$             | Input power                         |
| $\eta$            | Transmission efficiency             |
| $f_s$             | Service factor                      |

### 4.5 Service factor

We must take service factor into consideration when we use reducer.

$f_s$  service factor is determined according to the daily operating and the starting frequency Z.

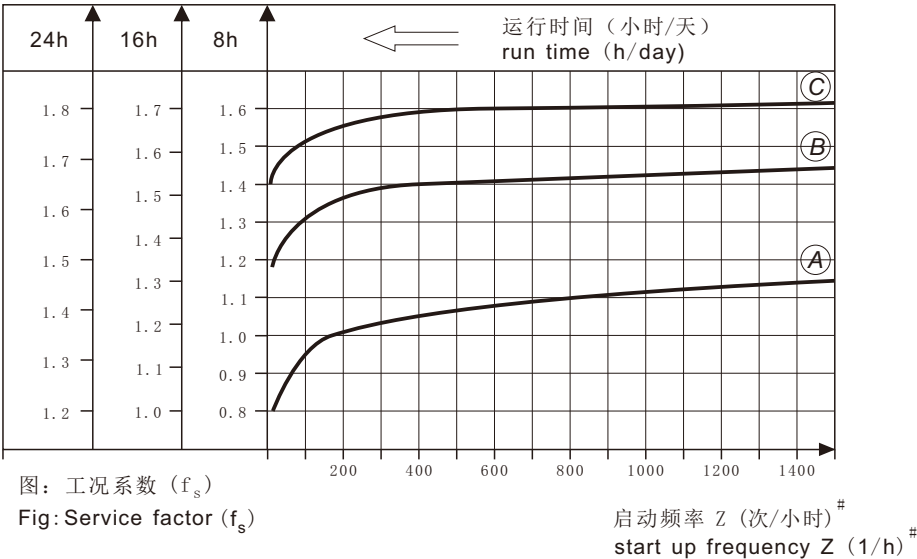
$f_B$  service factor is determined gear unit output torque.

Please meet below requirement when choose product:

$$f_B \geq f_s$$

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

Three load classifications are considered depending on the inertia coefficient. 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.



<sup>#</sup> 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。

<sup>#</sup> starting frequency  $Z$ : The cycles include all starting and braking procedures as well as change overs from low to high speed.

4.5.1 负载类型

- ① 均匀冲击负载，允许惯性加速系数  $f_a \leq 0.2$
- ② 中等冲击负载，允许惯性加速系数  $f_a \leq 3$
- ③ 重冲击负载，允许惯性加速系数  $f_a \leq 10$

负载类型：

- ① 螺杆输送，风扇，装备线，输送带，小型搅拌机，电梯，清洗机器，过滤器，控制驱动。
- ② 卷扬机，木工机器进料器，货物起重机，平衡器，绞螺纹机器，中型搅拌机，重型输送带，绞盘，滑动阀门，刮料机，包装机械，混凝土搅拌机，行车驱动装置，铣床，齿轮泵。
- ③ 大型搅拌机，剪床，压机，离心机，旋转支撑装置，重型绞盘和起重机，磨床，石材打磨机，翻斗机，钻床，冲床，凸轴压机，摺床，机床转盘，翻桶装置，振荡装置，破碎机。

4.5.1 load classifications

- ① Uniform shock load, permitted mass acceleration factor  $f_a \leq 0.2$
- ② Moderate shock load, permitted mass acceleration
- ③ Heavy shock load, permitted mass acceleration

Load classifications:

- ① Screw feeders, fans, assembly lines, conveyor belts, small mixers, lifts, cleaning machines, fillers, control machines.
- ② Winding devices, woodworking machine feeders, goods lifts, balancers, threading 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.
- ③ 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, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.

#### 4.5.2 惯性加速系数

惯性加速系数计算如下:

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

$f_a$  惯性加速系数  
 $J_c$  所有外部转动惯量 ( $\text{kgm}^2$ )  
 $J_m$  驱动电机转动惯量 ( $\text{kgm}^2$ )

如果惯性加速系数  $f_a > 10$ , 请与我们技术部联系

为了保持减速器的使用寿命, 从产品样本中的性能参数表所选择的使用系数  $f_B$  应等于或略高于实际应用中的工况系数  $f_s$

##### 举例:

惯性加速系数 2.5 (负载类型 **(B)**), 运行时间 14 小时/天, (按 16 小时/天查图) 和每小时 200 次起停, 查图得工况系数  $f_s = 1.48$ 。根据性能参数表所选择的使用系数  $f_B \geq 1.48$ 。

#### 4.6 径向载荷和轴向载荷

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

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

作用在电机和齿轮轴上的径向载荷按如下公式计算:

$$F_r = \frac{M \cdot 2000 \cdot f_z}{d_o} \quad [\text{N}]$$

$F_r$  作用在轴上的载荷 [N]  
 $M$  作用在轴上的扭矩 [Nm]  
 $d_o$  安装在轴上传动件的平均直径 [mm]  
 $f_z$  传动附加系数

#### 4.5.2 Interial coefficient

The interial coefficient is calculated as follows:

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

$f_a$  Coefficient of inertia  
 $J_c$  All external moments of inertia ( $\text{kgm}^2$ )  
 $J_m$  Moment of inertia of the motor ( $\text{kgm}^2$ )

If coefficient of inertia  $f_a > 10$ , please call our

To keep the lifetime of reducer, the use factor  $f_B$  selected from the catalogue must be equal or slightly

##### Example:

Inertial coefficient of 2.5 (load classification **(B)**), 14 hours/day operating time (read off at 16 h/d) and 200 stop/hour result in a service factor  $f_s = 1.48$ . According to the parameter sheet, we choose the service factor  $f_B \geq 1.48$ .

#### 4.6 Radial loads and axial forces

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  $f_z$ :

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

$$F_r = \frac{M \cdot 2000 \cdot f_z}{d_o} \quad [\text{N}]$$

$F_r$  Resulting radial load [N]  
 $M$  Torque on the shaft [Nm]  
 $d_o$  Mean diameter of transmission element mounted on shaft [mm]  
 $f_z$  Additional transmission factor

许用径向载荷是根据轴承额定使用寿命 $L_{10h}$ 来估算的（根据ISO281）。作用点位于输出轴伸的中部（ $L/2$ ）

The basis for determining the permitted radial loads is based on the rated service life  $L_{10h}$  of the bearings (according to ISO281).Function point is placed in the middle of exposed part of output shaft.

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

The permitted radial loads given in the selection tables must be calculated using the following formula in the event of force application not in the center of the shaft end. The smaller of the two values  $F_{XL}$ (according to bearing service life)

根据轴承的使用寿命公式:

$F_{XL}$  according to bearing service life:

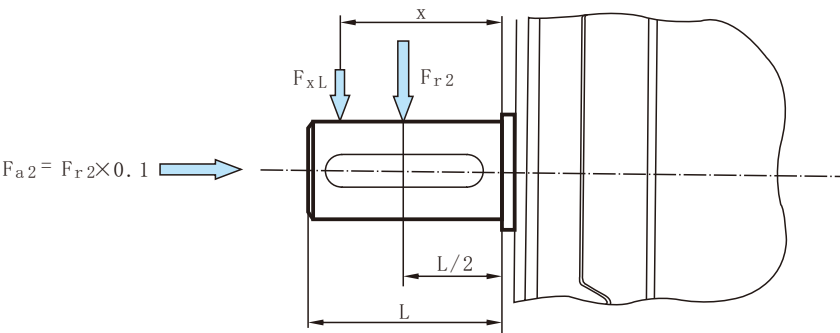
$$F_{XL} = F_{r2} \cdot \frac{a}{b+x} \quad [N]$$

$$F_{XL} = F_{r2} \cdot \frac{a}{b+x} \quad [N]$$

- $F_{r2}$  = 性能参数表中的许用径向载荷 ( $x=L/2$ ) [N]  
 $x$  = 从轴肩到受力点的距离[mm]  
 $a, b,$  = 减速机径向转化常量[mm]

- $F_{r2}$  = Permitted radial load( $x=L/2$ ) according to he selection tables in [N]  
 $x$  = Distance from the shaft shoulder to the force application point in [mm]  
 $a,b,$  = Constant conversion of radial load [mm]

输出轴径向载荷  $F_{r2}$ / radial loads of output shaft  $F_{r2}$



$F_{a2}$  = 输出轴向载荷  
Output axial loads

WKM 减速机径向转化常量 / Constants conversion of radial load of WKM reducer:

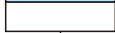
|   | WKM50B | WKM50C | WKM63B | WKM63C | WKM75B | WKM75C | WKM90B | WKM90C |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| a | 105.5  | 105.5  | 120    | 120    | 133    | 133    | 163    | 163    |
| b | 80.5   | 80.5   | 95     | 95     | 103    | 103    | 123    | 123    |

注：本减速机的输入轴不宜采用齿轮，皮带轮，等有较大径向力的传动形式输入，如有特殊需要，请与本公司技术部联系。  
Remark:This reducer is not suitable to connect with gear,pulley and so on,which have big radial force as input.If it has special requests,please contact our technical department.

4.7 选型表注释

|                                                                                   |                  |
|-----------------------------------------------------------------------------------|------------------|
|  | 表示电机与减速器的组合是可行的  |
|  | 表示电机与减速器的组合是不可行的 |
| *                                                                                 | 表示速比可除尽          |
| $P_{1n}$                                                                          | 电机额定功率 [kW];     |
| $P_{1MAX}$                                                                        | 电机最大功率 [kW];     |
| $n_2$                                                                             | 输出转速 [r/min];    |
| $M_2$                                                                             | 输出扭矩 [Nm];       |
| $M_{2max}$                                                                        | 最大允许输出扭矩 [Nm];   |
| $F_{r2}$                                                                          | 输出轴径向载荷 [N];     |
| $i$                                                                               | 减速器公称传动比;        |
| $i_a$                                                                             | 减速器实际传动比;        |
| $f_B$                                                                             | 使用系数;            |
|  | 减速器型号;           |
|  | 电机型号;            |

4.7 Selection tables comments

|                                                                                    |                                                              |
|------------------------------------------------------------------------------------|--------------------------------------------------------------|
|   | Combination with the motor in the header row is possible     |
|   | Combination with the motor in the header row is not possible |
| *                                                                                  | It means ratio is divisible                                  |
| $P_{1n}$                                                                           | Rated power of motor [kW];                                   |
| $P_{1MAX}$                                                                         | Max. motor power [kW];                                       |
| $n_2$                                                                              | Output speed [r/min];                                        |
| $M_2$                                                                              | Output torque [Nm];                                          |
| $M_{2max}$                                                                         | Max. allowed output torque [Nm];                             |
| $F_{r2}$                                                                           | Radial load of output shaft [N];                             |
| $i$                                                                                | Nominal ratio of reducer;                                    |
| $i_a$                                                                              | Actual ratio of reducer;                                     |
| $f_B$                                                                              | Service factor;                                              |
|   | Gear unit type;                                              |
|  | Motor type;                                                  |

## 5 选型举例

## 5.1 减速电机

例：被驱动设备所需功率0.66kW，工作16小时/天，中等冲击，启动频率50次/小时，输出转速 $n_2=28\text{r/min}$ ，减速机要求B3安装，则：

1. 查使用系数图表即可选工况系数 $f_s=1.4$

2. 传动比:  
ratio: 
$$i = \frac{n_1}{n_2} = \frac{1400}{28} = 50$$

3. 电机功率  
power of motor: 
$$P_{1n} \geq P_1 = \frac{P_2}{\eta} = \frac{0.66}{0.92} = 0.72 \text{ [kW]}$$
  
$$f_B \geq f_s$$

查WKM. .系列性能参数表可确定减速电机型号为：

**WKM75B - 48.18 - Y0.75-4 - B3**

$$f_B = 1.5 \geq f_s = 1.4$$

满足  $f_B \geq f_s$  的要求

## 5.2 减速器

例：被驱动设备所需扭矩为260Nm，工作16小时/天，均匀冲击负载，启动频率200次/小时，减速机要求FA1法兰安装，减速器要求输入转速1400r/min，输出转速 $n_2=12\text{r/min}$ ，请选合适减速机。

1. 查使用系数图表即可选工况系数 $f_s=1.47$

2. 传动比:  
ratio: 
$$i = \frac{n_1}{n_2} = \frac{1400}{12} = 125$$

（只能选三级传动）(the only selection is 3 stage)

3. 最大扭矩  
MAX torque 
$$M_{2MAX} \geq M_2 \cdot f_s = 260 \times 1.47 = 382 \text{ [Nm]}$$

4. 电机功率  
power of motor: 
$$P_{1n} \geq P_1 = \frac{M_2 \cdot n_1}{9550 \cdot \eta \cdot i} = \frac{260 \times 1400}{9550 \times 0.90 \times 125} = 0.34 \text{ [kW]}$$
  
$$f_B \geq f_s$$

查WKM系列性能参数表可确定减速型号为：

**WKMS90C-125.95-FA1** 轴输入减速器

$$f_B = 1.7 \geq f_s = 1.47$$

满足  $f_B \geq f_s$  的要求

建议采用0.37KW，1400r/min电机驱动，电机与减速器之间采用联轴器连接。

## 5 SELECTION EXAMPLE

## 5.1 Gear motor

Example: Required power 0.66kW on driven machine, work for 16 h/day, moderate shock load, start up frequency 50(1/h),  $n_2=28\text{r/min}$ , B3 mounted, So:

Check the service factor table, choose  $f_s=1.4$

Choose type:

**WKM75B - 48.18 - Y0.75-4 - B3**

Must meet requirement when  $f_B \geq f_s$

## 5.2 Gear units

Example: Required torque is 260Nm on driven machine, work 16 h/day, uniform load, start up frequency 200(1/h), FA1 mounted,  $n_1=1400 \text{ r/min}$ ,  $n_2=12 \text{ r/min}$ , please choose suitable reducer:

Check the service factor table , choose  $f_s=1.47$

Choose type:

**WKMS90C-125.95-FA1** Shaft input reducer

Must meet requirement when  $f_B \geq f_s$

Advice to take 0.37KW, 1400r/min motor as drive, we use coupling to connect reducer and motor.

## 6. 减速器选型表 / GEAR UNIT SELECTION TABLES

### 6.1 减速器组合表 / Possible geometrical combinations

**WKM 50..**  $n_1=1400 \text{ r/min}$ 
**130Nm**

| 减速器型号<br>Gear units | i<br>公称<br>Nominal | i<br>实际<br>Actual | $n_2$<br>[r/min] | $M_{2MAX}$<br>[Nm] | $F_{T2}$<br>[N] | 63B5 | 71B5<br>71B14 | 80B5<br>80B14 | 90B5<br>90B14 |
|---------------------|--------------------|-------------------|------------------|--------------------|-----------------|------|---------------|---------------|---------------|
| 3 级 / 3 Stage       |                    |                   |                  |                    |                 |      |               |               |               |
| WKM50C              | 300                | 291.79            | 4.8              | 130                | 4100            |      |               |               |               |
| WKM50C              | 250                | 244.29            | 5.7              | 130                | 4100            |      |               |               |               |
| WKM50C              | 200                | 200.44            | 7.0              | 130                | 4100            |      |               |               |               |
| WKM50C              | 150                | 146.67            | 9.5              | 130                | 4000            |      |               |               |               |
| WKM50C              | 125                | 120.34            | 11.6             | 100                | 3770            |      |               |               |               |
| WKM50C              | 100                | 101.04            | 13.9             | 80                 | 3560            |      |               |               |               |
| WKM50C              | 75                 | 74.62             | 18.8             | 130                | 3220            |      |               |               |               |
| WKM50C              | 60                 | 62.36             | 22               | 100                | 3030            |      |               |               |               |
| WKM50C              | 50                 | 52.36             | 27               | 110                | 2860            |      |               |               |               |
| 2 级 / 2 Stage       |                    |                   |                  |                    |                 |      |               |               |               |
| WKM50B              | 60                 | 58.36             | 24               | 130                | 2960            |      |               |               |               |
| WKM50B              | 50                 | 48.86             | 29               | 130                | 2790            |      |               |               |               |
| WKM50B              | 40                 | 40.09             | 35               | 130                | 2610            |      |               |               |               |
| WKM50B              | 30                 | 29.33             | 48               | 130                | 2350            |      |               |               |               |
| WKM50B              | 25                 | 24.07             | 59               | 130                | 2200            |      |               |               |               |
| WKM50B              | 20                 | 20.21             | 70               | 100                | 2080            |      |               |               |               |
| WKM50B              | 15                 | 14.92             | 94               | 80                 | 1880            |      |               |               |               |
| WKM50B              | 12.5               | 12.47             | 113              | 130                | 1770            |      |               |               |               |
| WKM50B              | 10                 | 10.47             | 134              | 100                | 1670            |      |               |               |               |
| WKM50B              | 7.5                | 7.73              | 182              | 80                 | 1510            |      |               |               |               |

**WKM 63..**  $n_1=1400 \text{ r/min}$ 
**200Nm**

| 减速器型号<br>Gear units | i<br>公称<br>Nominal | i<br>实际<br>Actual | $n_2$<br>[r/min] | $M_{2MAX}$<br>[Nm] | $F_{T2}$<br>[N] | 63B5 | 71B5<br>71B14 | 80B5<br>80B14 | 90B5<br>90B14 |
|---------------------|--------------------|-------------------|------------------|--------------------|-----------------|------|---------------|---------------|---------------|
| 3 级 / 3 Stage       |                    |                   |                  |                    |                 |      |               |               |               |
| WKM63C              | 300                | 304.46            | 4.7              | 200                | 4800            |      |               |               |               |
| WKM63C              | 250                | 242.26            | 5.8              | 200                | 4800            |      |               |               |               |
| WKM63C              | 200                | 196.43            | 7.2              | 180                | 4800            |      |               |               |               |
| WKM63C              | 150                | 150.74            | 9.3              | 200                | 4650            |      |               |               |               |
| WKM63C              | 125                | 122.22            | 12               | 180                | 4330            |      |               |               |               |
| WKM63C              | 100                | 101.27            | 14               | 150                | 4070            |      |               |               |               |
| WKM63C              | 75                 | 73.33             | 20               | 110                | 3650            |      |               |               |               |
| WKM63C              | 60                 | 63.33             | 23               | 180                | 3480            |      |               |               |               |
| WKM63C              | 50                 | 52.48             | 27               | 150                | 3270            |      |               |               |               |
| 2 级 / 2 Stage       |                    |                   |                  |                    |                 |      |               |               |               |
| WKM63B              | 60                 | 60.89             | 24               | 200                | 3430            |      |               |               |               |
| WKM63B              | 50                 | 48.45             | 29               | 200                | 3190            |      |               |               |               |
| WKM63B              | 40                 | 39.29             | 36               | 180                | 2970            |      |               |               |               |
| WKM63B              | 30                 | 30.15             | 47               | 200                | 2720            |      |               |               |               |
| WKM63B              | 25                 | 24.44             | 58               | 180                | 2530            |      |               |               |               |
| WKM63B              | 20                 | 20.25             | 70               | 150                | 2380            |      |               |               |               |
| WKM63B              | 15                 | 14.67             | 96               | 110                | 2130            |      |               |               |               |
| WKM63B              | 12.5               | 12.67             | 111              | 180                | 2030            |      |               |               |               |
| WKM63B              | 10                 | 10.50             | 134              | 150                | 1910            |      |               |               |               |
| WKM63B              | 7.5                | 7.60              | 185              | 110                | 1710            |      |               |               |               |

**WKM 75..** $n_1=1400$  r/min**350Nm**

| 减速器型号<br>Gear units | i<br>公称<br>Nominal | i<br>实际<br>Actual | $n_2$<br>[r/min] | $M_{2MAX}$<br>[Nm] | $F_{r2}$<br>[N] | 63B5 | 71B5 | 80B5<br>80B14 | 90B5<br>90B14 | 100B5<br>100B14 | 112B5<br>112B14 |
|---------------------|--------------------|-------------------|------------------|--------------------|-----------------|------|------|---------------|---------------|-----------------|-----------------|
| 3 级 / Stage         |                    |                   |                  |                    |                 |      |      |               |               |                 |                 |
| WKM75C              | 300                | 295.18            | 4.8              | 350                | 6500            |      |      |               |               |                 |                 |
| WKM75C              | 250                | 240.89            | 5.9              | 350                | 6500            |      |      |               |               |                 |                 |
| WKM75C              | 200                | 200.66            | 7.0              | 300                | 6500            |      |      |               |               |                 |                 |
| WKM75C              | 150                | 149.29            | 9.3              | 350                | 6500            |      |      |               |               |                 |                 |
| WKM75C              | 125                | 121.02            | 12               | 300                | 5980            |      |      |               |               |                 |                 |
| WKM75C              | 100                | 100.81            | 15               | 240                | 5520            |      |      |               |               |                 |                 |
| WKM75C              | 75                 | 79.41             | 19               | 200                | 5040            |      |      |               |               |                 |                 |
| WKM75C              | 60                 | 62.43             | 23               | 300                | 4730            |      |      |               |               |                 |                 |
| WKM75C              | 50                 | 49.18             | 29               | 240                | 4370            |      |      |               |               |                 |                 |
| 2 级 / Stage         |                    |                   |                  |                    |                 |      |      |               |               |                 |                 |
| WKM75B              | 60                 | 59.04             | 24               | 350                | 4660            |      |      |               |               |                 |                 |
| WKM75B              | 50                 | 48.18             | 30               | 350                | 4340            |      |      |               |               |                 |                 |
| WKM75B              | 40                 | 40.13             | 35               | 300                | 4080            |      |      |               |               |                 |                 |
| WKM75B              | 30                 | 29.66             | 47               | 350                | 3720            |      |      |               |               |                 |                 |
| WKM75B              | 25                 | 24.20             | 56               | 300                | 3500            |      |      |               |               |                 |                 |
| WKM75B              | 20                 | 20.16             | 71               | 240                | 3230            |      |      |               |               |                 |                 |
| WKM75B              | 15                 | 15.88             | 93               | 200                | 2950            |      |      |               |               |                 |                 |
| WKM75B              | 12.5               | 12.49             | 113              | 300                | 2770            |      |      |               |               |                 |                 |
| WKM75B              | 10                 | 9.84              | 143              | 240                | 2550            |      |      |               |               |                 |                 |
| WKM75B              | 7.5                | 7.48              | 188              | 200                | 2330            |      |      |               |               |                 |                 |

**WKM 90..** $n_1=1400$  r/min**500Nm**

| 减速器型号<br>Gear units | i<br>公称<br>Nominal | i<br>实际<br>Actual | $n_2$<br>[r/min] | $M_{2MAX}$<br>[Nm] | $F_{r2}$<br>[N] | 63B5 | 71B5 | 80B5<br>80B14 | 90B5<br>90B14 | 100B5<br>100B14 | 112B5<br>112B14 |
|---------------------|--------------------|-------------------|------------------|--------------------|-----------------|------|------|---------------|---------------|-----------------|-----------------|
| 3 级 / Stage         |                    |                   |                  |                    |                 |      |      |               |               |                 |                 |
| WKM90C              | 300                | 295.18            | 4.8              | 500                | 8300            |      |      |               |               |                 |                 |
| WKM90C              | 250                | 240.89            | 5.9              | 500                | 8300            |      |      |               |               |                 |                 |
| WKM90C              | 200                | 200.66            | 7.0              | 480                | 8300            |      |      |               |               |                 |                 |
| WKM90C              | 150                | 151.20            | 9.3              | 500                | 8050            |      |      |               |               |                 |                 |
| WKM90C              | 125                | 125.95            | 12               | 480                | 7580            |      |      |               |               |                 |                 |
| WKM90C              | 100                | 99.22             | 15               | 380                | 7000            |      |      |               |               |                 |                 |
| WKM90C              | 75                 | 75.45             | 19               | 300                | 6390            |      |      |               |               |                 |                 |
| WKM90C              | 60                 | 62.43             | 23               | 480                | 6000            |      |      |               |               |                 |                 |
| WKM90C              | 50                 | 49.18             | 29               | 380                | 5540            |      |      |               |               |                 |                 |
| 2 级 / Stage         |                    |                   |                  |                    |                 |      |      |               |               |                 |                 |
| WKM90B              | 60                 | 59.04             | 24               | 500                | 5890            |      |      |               |               |                 |                 |
| WKM90B              | 50                 | 48.18             | 30               | 500                | 5500            |      |      |               |               |                 |                 |
| WKM90B              | 40                 | 40.13             | 35               | 480                | 5170            |      |      |               |               |                 |                 |
| WKM90B              | 30                 | 30.24             | 47               | 500                | 4710            |      |      |               |               |                 |                 |
| WKM90B              | 25                 | 25.19             | 56               | 480                | 4430            |      |      |               |               |                 |                 |
| WKM90B              | 20                 | 19.84             | 71               | 380                | 4090            |      |      |               |               |                 |                 |
| WKM90B              | 15                 | 15.09             | 93               | 300                | 3730            |      |      |               |               |                 |                 |
| WKM90B              | 12.5               | 12.49             | 113              | 480                | 3510            |      |      |               |               |                 |                 |
| WKM90B              | 10                 | 9.84              | 143              | 380                | 3240            |      |      |               |               |                 |                 |
| WKM90B              | 7.5                | 7.48              | 188              | 300                | 2950            |      |      |               |               |                 |                 |

## 6.2 WKM.. 性能参数 / Performance parameter

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.12                    | 5.7                       | 180                    | 250                | 244.29            | 4100                   | 0.7            | WKM50C                                                                             | 63B5-4                                                                              |
|                         | 7.0                       | 148                    | 200                | 200.44            | 4100                   | 0.9            |                                                                                    |                                                                                     |
|                         | 9.5                       | 108                    | 150                | 146.67            | 4000                   | 1.2            |                                                                                    |                                                                                     |
|                         | 11.6                      | 89                     | 125                | 120.34            | 3770                   | 1.1            |                                                                                    |                                                                                     |
|                         | 13.9                      | 74                     | 100                | 101.04            | 3560                   | 1.0            |                                                                                    |                                                                                     |
|                         | 18.8                      | 55                     | 75                 | 74.62             | 3220                   | 2.3            |                                                                                    |                                                                                     |
|                         | 22.5                      | 46                     | 60                 | 62.36             | 3030                   | 2.1            |                                                                                    |                                                                                     |
|                         | 26.7                      | 39                     | 50                 | 52.36             | 2860                   | 2.8            |                                                                                    |                                                                                     |
|                         | 24.0                      | 44                     | 60                 | 58.36             | 2960                   | 3.0            | WKM50B                                                                             | 63B5-4                                                                              |
|                         | 28.7                      | 37                     | 50                 | 48.86             | 2790                   | 3.5            |                                                                                    |                                                                                     |
|                         | 35                        | 30                     | 40                 | 40.09             | 2610                   | 4.2            |                                                                                    |                                                                                     |
|                         | 48                        | 22                     | 30                 | 29.33             | 2350                   | 5.8            |                                                                                    |                                                                                     |
|                         | 58                        | 18                     | 25                 | 24.07             | 2200                   | 7.0            |                                                                                    |                                                                                     |
|                         | 69                        | 15.2                   | 20                 | 20.21             | 2080                   | 6.6            |                                                                                    |                                                                                     |
|                         | 94                        | 11.2                   | 15                 | 14.92             | 1880                   | 7.1            |                                                                                    |                                                                                     |
|                         | 112                       | 9.4                    | 12.5               | 12.47             | 1770                   | 13.5           |                                                                                    |                                                                                     |
|                         | 134                       | 7.9                    | 10                 | 10.47             | 1670                   | 12.7           |                                                                                    |                                                                                     |
|                         | 181                       | 5.8                    | 7.5                | 7.73              | 1510                   | 13.7           |                                                                                    |                                                                                     |
|                         | 5.7                       | 179                    | 250                | 242.26            | 4800                   | 1.1            | WKM63C                                                                             | 63B5-4                                                                              |
|                         | 7.1                       | 145                    | 200                | 196.43            | 4800                   | 1.2            |                                                                                    |                                                                                     |
|                         | 9.2                       | 112                    | 150                | 150.74            | 4650                   | 1.8            |                                                                                    |                                                                                     |
|                         | 11.5                      | 90                     | 125                | 122.22            | 4330                   | 2.0            |                                                                                    |                                                                                     |
|                         | 13.8                      | 75                     | 100                | 101.27            | 4070                   | 2.0            |                                                                                    |                                                                                     |
|                         | 19.1                      | 54                     | 75                 | 73.33             | 3650                   | 2.0            |                                                                                    |                                                                                     |
|                         | 22.1                      | 47                     | 60                 | 63.33             | 3480                   | 3.9            |                                                                                    |                                                                                     |
|                         | 26.7                      | 39                     | 50                 | 52.48             | 3270                   | 3.9            |                                                                                    |                                                                                     |
|                         | 23.1                      | 46                     | 60                 | 60.89             | 3430                   | 4.4            | WKM63B                                                                             | 63B5-4                                                                              |
|                         | 28.7                      | 37                     | 50                 | 48.45             | 3190                   | 5.5            |                                                                                    |                                                                                     |
|                         | 36                        | 30                     | 40                 | 39.29             | 2970                   | 6.1            |                                                                                    |                                                                                     |
|                         | 46                        | 23                     | 30                 | 30.15             | 2720                   | 8.8            | WKM75C                                                                             | 63B5-4                                                                              |
|                         | 4.7                       | 219                    | 300                | 295.18            | 6500                   | 1.6            |                                                                                    |                                                                                     |
|                         | 5.8                       | 177                    | 250                | 240.89            | 6500                   | 2.0            |                                                                                    |                                                                                     |
|                         | 7.0                       | 148                    | 200                | 200.66            | 6500                   | 2.0            |                                                                                    |                                                                                     |
|                         | 9.3                       | 111                    | 150                | 149.28            | 6500                   | 3.1            |                                                                                    |                                                                                     |
|                         | 11.1                      | 93                     | 125                | 121.42            | 5980                   | 3.2            | WKM90C                                                                             | 63B5-4                                                                              |
|                         | 4.7                       | 217                    | 300                | 295.18            | 8300                   | 2.3            |                                                                                    |                                                                                     |
|                         | 5.8                       | 177                    | 250                | 240.89            | 8300                   | 2.8            |                                                                                    |                                                                                     |
|                         | 7.0                       | 148                    | 200                | 200.66            | 8300                   | 3.2            |                                                                                    |                                                                                     |
|                         | 9                         | 111                    | 150                | 151.20            | 8050                   | 4.5            |                                                                                    |                                                                                     |
| 0.18                    | 9.6                       | 161                    | 300                | 291.79            | 4000                   | 0.8            | WKM50C                                                                             | 63B5-2                                                                              |
|                         | 11.5                      | 135                    | 250                | 244.29            | 3790                   | 0.9            |                                                                                    |                                                                                     |
|                         | 14.0                      | 111                    | 200                | 200.44            | 3550                   | 1.2            |                                                                                    |                                                                                     |
|                         | 19.1                      | 81                     | 150                | 146.67            | 3200                   | 1.6            |                                                                                    |                                                                                     |
|                         | 23.3                      | 66                     | 125                | 120.34            | 2990                   | 2.0            |                                                                                    |                                                                                     |
|                         | 27.7                      | 56                     | 100                | 101.04            | 2820                   | 1.8            |                                                                                    |                                                                                     |
|                         | 38                        | 41                     | 75                 | 74.62             | 2550                   | 1.9            |                                                                                    |                                                                                     |
|                         | 45                        | 34                     | 60                 | 62.36             | 2400                   | 3.8            |                                                                                    |                                                                                     |
|                         | 53                        | 29                     | 50                 | 52.36             | 2270                   | 3.5            | WKM50B                                                                             | 63B5-2                                                                              |
|                         | 48                        | 33                     | 60                 | 58.36             | 2350                   | 3.8            |                                                                                    |                                                                                     |
|                         | 57                        | 27                     | 50                 | 48.86             | 2220                   | 4.6            |                                                                                    |                                                                                     |
|                         | 70                        | 22                     | 40                 | 40.09             | 2070                   | 5.6            |                                                                                    |                                                                                     |
|                         | 95                        | 16                     | 30                 | 29.33             | 1870                   | 7.7            |                                                                                    |                                                                                     |
|                         | 116                       | 13                     | 25                 | 24.07             | 1750                   | 9.4            |                                                                                    |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.18                    | 11.6                      | 133                    | 125                | 120.34            | 3770                   | 1.0            | WKM50C                                                                              | 63B5-4                                                                              |
|                         | 13.9                      | 112                    | 100                | 101.04            | 3560                   | 0.9            |                                                                                     |                                                                                     |
|                         | 18.8                      | 82                     | 75                 | 74.62             | 3220                   | 1.0            |                                                                                     |                                                                                     |
|                         | 22.5                      | 69                     | 60                 | 62.36             | 3030                   | 1.9            |                                                                                     |                                                                                     |
|                         | 26.7                      | 58                     | 50                 | 52.36             | 2860                   | 1.7            | WKM50B                                                                              | 63B5-4                                                                              |
|                         | 24.0                      | 66                     | 60                 | 58.36             | 2960                   | 2.0            |                                                                                     |                                                                                     |
|                         | 28.7                      | 55                     | 50                 | 48.86             | 2790                   | 2.4            |                                                                                     |                                                                                     |
|                         | 35                        | 45                     | 40                 | 40.09             | 2610                   | 2.9            |                                                                                     |                                                                                     |
|                         | 48                        | 33                     | 30                 | 29.33             | 2350                   | 3.9            |                                                                                     |                                                                                     |
|                         | 58                        | 27                     | 25                 | 24.07             | 2200                   | 4.7            |                                                                                     |                                                                                     |
|                         | 69                        | 23                     | 20                 | 20.21             | 2080                   | 4.4            |                                                                                     |                                                                                     |
|                         | 94                        | 16.9                   | 15                 | 14.92             | 1880                   | 4.7            |                                                                                     |                                                                                     |
|                         | 112                       | 14.1                   | 12.5               | 12.47             | 1770                   | 9.0            | WKM50C                                                                              | 71B5/B14-6                                                                          |
|                         | 134                       | 11.8                   | 10                 | 10.47             | 1670                   | 8.3            |                                                                                     |                                                                                     |
|                         | 181                       | 8.7                    | 7.5                | 7.73              | 1510                   | 9.0            |                                                                                     |                                                                                     |
|                         | 12.1                      | 128                    | 75                 | 74.62             | 3730                   | 1.0            | WKM50B                                                                              | 71B5/B14-6                                                                          |
|                         | 14.4                      | 107                    | 60                 | 62.36             | 3510                   | 0.9            |                                                                                     |                                                                                     |
|                         | 17.2                      | 90                     | 50                 | 52.36             | 3310                   | 1.2            |                                                                                     |                                                                                     |
|                         | 15.4                      | 103                    | 60                 | 58.36             | 3430                   | 1.3            |                                                                                     |                                                                                     |
|                         | 18.4                      | 86                     | 50                 | 48.86             | 3240                   | 1.5            |                                                                                     |                                                                                     |
|                         | 22.4                      | 70                     | 40                 | 40.09             | 3030                   | 1.8            |                                                                                     |                                                                                     |
|                         | 31                        | 52                     | 30                 | 29.33             | 2730                   | 2.5            |                                                                                     |                                                                                     |
|                         | 37                        | 42                     | 25                 | 24.07             | 2550                   | 3.1            |                                                                                     |                                                                                     |
|                         | 45                        | 36                     | 20                 | 20.21             | 2410                   | 2.8            | WKM63C                                                                              | 63B5-2                                                                              |
|                         | 60                        | 26                     | 15                 | 14.92             | 2180                   | 3.1            |                                                                                     |                                                                                     |
|                         | 72                        | 22                     | 12.5               | 12.47             | 2050                   | 5.9            |                                                                                     |                                                                                     |
|                         | 9.3                       | 167                    | 300                | 304.46            | 4650                   | 1.2            |                                                                                     |                                                                                     |
|                         | 11.5                      | 135                    | 250                | 242.26            | 4330                   | 1.5            |                                                                                     |                                                                                     |
|                         | 14.3                      | 109                    | 200                | 196.43            | 4030                   | 1.7            |                                                                                     |                                                                                     |
|                         | 18.5                      | 84                     | 150                | 150.74            | 3690                   | 2.4            |                                                                                     |                                                                                     |
|                         | 22.9                      | 68                     | 125                | 122.22            | 3440                   | 2.7            |                                                                                     |                                                                                     |
|                         | 27.6                      | 56                     | 100                | 101.27            | 3230                   | 2.7            | WKM63C                                                                              | 63B5-4                                                                              |
|                         | 38                        | 41                     | 75                 | 73.33             | 2900                   | 2.7            |                                                                                     |                                                                                     |
|                         | 44                        | 35                     | 60                 | 63.33             | 2760                   | 5.1            |                                                                                     |                                                                                     |
|                         | 53                        | 29                     | 50                 | 52.48             | 2590                   | 5.2            |                                                                                     |                                                                                     |
|                         | 7.1                       | 217                    | 200                | 196.43            | 4800                   | 0.8            |                                                                                     |                                                                                     |
|                         | 9.2                       | 167                    | 150                | 150.74            | 4650                   | 1.2            |                                                                                     |                                                                                     |
|                         | 11.5                      | 135                    | 125                | 122.22            | 4330                   | 1.3            |                                                                                     |                                                                                     |
|                         | 13.8                      | 112                    | 100                | 101.27            | 4070                   | 1.3            |                                                                                     |                                                                                     |
|                         | 19.1                      | 81                     | 75                 | 73.33             | 3650                   | 1.4            | WKM63B                                                                              | 63B5-4                                                                              |
|                         | 22.1                      | 70                     | 60                 | 63.33             | 3480                   | 2.6            |                                                                                     |                                                                                     |
|                         | 26.7                      | 58                     | 50                 | 52.48             | 3270                   | 2.6            |                                                                                     |                                                                                     |
|                         | 23.1                      | 68                     | 60                 | 60.89             | 3430                   | 2.9            | WKM63C                                                                              | 71B5/B14-6                                                                          |
|                         | 28.7                      | 55                     | 50                 | 48.45             | 3190                   | 3.6            |                                                                                     |                                                                                     |
|                         | 36                        | 44                     | 40                 | 39.29             | 2970                   | 4.1            |                                                                                     |                                                                                     |
|                         | 7.4                       | 210                    | 125                | 122.22            | 4800                   | 0.9            | WKM63B                                                                              | 71B5/B14-6                                                                          |
|                         | 8.9                       | 174                    | 100                | 101.27            | 4720                   | 0.9            |                                                                                     |                                                                                     |
|                         | 12.3                      | 126                    | 75                 | 73.33             | 4230                   | 0.9            |                                                                                     |                                                                                     |
|                         | 14.2                      | 109                    | 60                 | 63.33             | 4030                   | 1.7            |                                                                                     |                                                                                     |
|                         | 17.1                      | 90                     | 50                 | 52.48             | 3790                   | 1.7            | WKM75C                                                                              | 63B5-2                                                                              |
|                         | 14.9                      | 106                    | 60                 | 60.89             | 3970                   | 1.9            |                                                                                     |                                                                                     |
|                         | 18.5                      | 86                     | 50                 | 48.45             | 3690                   | 2.3            |                                                                                     |                                                                                     |
|                         | 22.9                      | 69                     | 40                 | 39.29             | 3440                   | 2.6            |                                                                                     |                                                                                     |
|                         | 29.7                      | 53                     | 30                 | 30.15             | 3150                   | 3.8            | WKM75C                                                                              | 63B5-2                                                                              |
|                         | 9.4                       | 164                    | 300                | 295.18            | 6320                   | 2.1            |                                                                                     |                                                                                     |
|                         | 11.6                      | 133                    | 250                | 240.89            | 5890                   | 2.6            |                                                                                     |                                                                                     |
|                         | 14.0                      | 111                    | 200                | 200.66            | 5540                   | 2.7            |                                                                                     |                                                                                     |
|                         | 18.5                      | 84                     | 150                | 149.29            | 5040                   | 4.2            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.18                    | 4.7                       | 328                    | 300                | 295.18            | 6500                   | 1.1            | WKM75C                                                                              | 63B5-4                                                                              |
|                         | 5.8                       | 266                    | 250                | 240.89            | 6500                   | 1.3            |                                                                                     |                                                                                     |
|                         | 7.0                       | 222                    | 200                | 200.66            | 6500                   | 1.4            |                                                                                     |                                                                                     |
|                         | 9.3                       | 167                    | 150                | 149.29            | 6500                   | 2.1            |                                                                                     |                                                                                     |
|                         | 11.1                      | 139                    | 125                | 121.02            | 5980                   | 2.2            |                                                                                     |                                                                                     |
|                         | 14.1                      | 110                    | 100                | 100.81            | 5520                   | 2.2            |                                                                                     |                                                                                     |
|                         | 18.6                      | 83                     | 75                 | 79.46             | 5040                   | 2.4            |                                                                                     |                                                                                     |
|                         | 4.5                       | 345                    | 200                | 200.66            | 6500                   | 0.87           | WKM75C                                                                              | 71B5-6                                                                              |
|                         | 6.0                       | 260                    | 150                | 149.29            | 6500                   | 1.3            |                                                                                     |                                                                                     |
|                         | 7.1                       | 217                    | 125                | 121.02            | 6500                   | 1.4            |                                                                                     |                                                                                     |
|                         | 9.1                       | 171                    | 100                | 100.81            | 6400                   | 1.4            |                                                                                     |                                                                                     |
|                         | 11.9                      | 130                    | 75                 | 79.46             | 5840                   | 1.5            |                                                                                     |                                                                                     |
|                         | 14.4                      | 107                    | 60                 | 62.43             | 5480                   | 2.8            |                                                                                     |                                                                                     |
|                         | 18.3                      | 85                     | 50                 | 49.18             | 5060                   | 2.8            |                                                                                     |                                                                                     |
|                         | 15.1                      | 104                    | 60                 | 59.04             | 5390                   | 3.4            | WKM75B                                                                              | 71B5-6                                                                              |
|                         | 18.7                      | 85                     | 50                 | 48.18             | 5030                   | 4.1            |                                                                                     |                                                                                     |
|                         | 9.5                       | 163                    | 300                | 295.18            | 7990                   | 3.1            | WKM90C                                                                              | 63B5-2                                                                              |
|                         | 11.6                      | 133                    | 250                | 240.89            | 7470                   | 3.8            |                                                                                     |                                                                                     |
|                         | 4.7                       | 326                    | 300                | 295.18            | 8300                   | 1.5            | WKM90C                                                                              | 63B5-4                                                                              |
|                         | 5.8                       | 266                    | 250                | 240.89            | 8300                   | 1.9            |                                                                                     |                                                                                     |
|                         | 7.0                       | 222                    | 200                | 200.66            | 8300                   | 2.2            |                                                                                     |                                                                                     |
|                         | 9.3                       | 167                    | 150                | 151.20            | 8050                   | 3.0            |                                                                                     |                                                                                     |
|                         | 11.1                      | 139                    | 125                | 125.95            | 7580                   | 3.4            |                                                                                     |                                                                                     |
|                         | 3.7                       | 414                    | 250                | 240.89            | 8300                   | 1.2            | WKM90C                                                                              | 71B5-6                                                                              |
|                         | 4.5                       | 345                    | 200                | 200.66            | 8300                   | 1.4            |                                                                                     |                                                                                     |
|                         | 6.0                       | 260                    | 150                | 151.20            | 8300                   | 1.9            |                                                                                     |                                                                                     |
|                         | 7.1                       | 217                    | 125                | 125.95            | 8300                   | 2.2            |                                                                                     |                                                                                     |
|                         | 9.1                       | 171                    | 100                | 99.22             | 8110                   | 2.2            |                                                                                     |                                                                                     |
|                         | 11.9                      | 130                    | 75                 | 75.45             | 7400                   | 2.3            |                                                                                     |                                                                                     |
|                         | 14.4                      | 107                    | 60                 | 62.43             | 6950                   | 4.5            |                                                                                     |                                                                                     |
| 0.25                    | 19.1                      | 113                    | 150                | 146.67            | 3200                   | 1.2            | WKM50C                                                                              | 63B5-2                                                                              |
|                         | 23.3                      | 92                     | 125                | 120.34            | 2990                   | 1.4            |                                                                                     |                                                                                     |
|                         | 27.7                      | 78                     | 100                | 101.04            | 2820                   | 1.3            |                                                                                     |                                                                                     |
|                         | 38                        | 57                     | 75                 | 74.62             | 2550                   | 1.4            |                                                                                     |                                                                                     |
|                         | 45                        | 48                     | 60                 | 62.36             | 2400                   | 2.7            |                                                                                     |                                                                                     |
|                         | 53                        | 40                     | 50                 | 52.36             | 2270                   | 2.4            | WKM50B                                                                              | 63B5-2                                                                              |
|                         | 48                        | 46                     | 60                 | 58.36             | 2350                   | 2.7            |                                                                                     |                                                                                     |
|                         | 57                        | 38                     | 50                 | 48.86             | 2220                   | 3.3            |                                                                                     |                                                                                     |
|                         | 70                        | 31                     | 40                 | 40.09             | 2070                   | 4.0            | WKM50C                                                                              | 71B5/B14-4                                                                          |
|                         | 18.8                      | 114                    | 75                 | 74.62             | 3220                   | 0.94           |                                                                                     |                                                                                     |
|                         | 22.5                      | 96                     | 60                 | 62.36             | 3030                   | 1.4            |                                                                                     |                                                                                     |
|                         | 26.7                      | 80                     | 50                 | 52.36             | 2860                   | 1.2            | WKM50B                                                                              | 71B5/B14-4                                                                          |
|                         | 24.0                      | 92                     | 60                 | 58.36             | 2960                   | 1.4            |                                                                                     |                                                                                     |
|                         | 28.7                      | 77                     | 50                 | 48.86             | 2790                   | 1.7            |                                                                                     |                                                                                     |
|                         | 35                        | 63                     | 40                 | 40.09             | 2610                   | 2.1            |                                                                                     |                                                                                     |
|                         | 48                        | 46                     | 30                 | 29.33             | 2350                   | 2.8            |                                                                                     |                                                                                     |
|                         | 58                        | 38                     | 25                 | 24.07             | 2200                   | 3.4            |                                                                                     |                                                                                     |
|                         | 69                        | 32                     | 20                 | 20.21             | 2080                   | 3.2            |                                                                                     |                                                                                     |
|                         | 94                        | 23                     | 15                 | 14.92             | 1880                   | 3.4            |                                                                                     |                                                                                     |
|                         | 18.4                      | 119                    | 50                 | 48.86             | 3240                   | 1.1            | WKM50B                                                                              | 71B5/B14-6                                                                          |
|                         | 22.4                      | 98                     | 40                 | 40.09             | 3030                   | 1.3            |                                                                                     |                                                                                     |
|                         | 31                        | 72                     | 30                 | 29.33             | 2730                   | 1.8            |                                                                                     |                                                                                     |
|                         | 37                        | 59                     | 25                 | 24.07             | 2550                   | 2.2            |                                                                                     |                                                                                     |
|                         | 45                        | 49                     | 20                 | 20.21             | 2410                   | 2.0            |                                                                                     |                                                                                     |
|                         | 60                        | 36                     | 15                 | 14.92             | 2180                   | 2.2            |                                                                                     |                                                                                     |
|                         | 72                        | 30                     | 12.5               | 12.47             | 2050                   | 4.3            |                                                                                     |                                                                                     |
|                         | 86                        | 26                     | 10                 | 10.47             | 1930                   | 3.9            |                                                                                     |                                                                                     |
|                         | 116                       | 19                     | 7.5                | 7.73              | 1750                   | 4.2            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.25                    | 11.5                      | 187                    | 250                | 242.26            | 4330                   | 1.1            | WKM63C                                                                              | 63B5-2                                                                              |
|                         | 14.3                      | 151                    | 200                | 196.43            | 4030                   | 1.2            |                                                                                     |                                                                                     |
|                         | 18.5                      | 116                    | 150                | 150.24            | 3690                   | 1.7            |                                                                                     |                                                                                     |
|                         | 22.9                      | 94                     | 125                | 122.22            | 3440                   | 1.9            |                                                                                     |                                                                                     |
|                         | 27.6                      | 78                     | 100                | 101.27            | 3230                   | 1.9            |                                                                                     |                                                                                     |
|                         | 38                        | 56                     | 75                 | 73.33             | 2900                   | 2.0            |                                                                                     |                                                                                     |
|                         | 44                        | 49                     | 60                 | 63.33             | 2760                   | 3.7            |                                                                                     |                                                                                     |
|                         | 53                        | 40                     | 50                 | 52.48             | 2590                   | 3.7            |                                                                                     |                                                                                     |
|                         | 11.5                      | 188                    | 125                | 122.22            | 4330                   | 1.0            | WKM63C                                                                              | 71B5/B14-4                                                                          |
|                         | 13.8                      | 155                    | 100                | 101.27            | 4070                   | 1.0            |                                                                                     |                                                                                     |
|                         | 19.1                      | 113                    | 75                 | 73.33             | 3650                   | 1.0            |                                                                                     |                                                                                     |
|                         | 22.1                      | 97                     | 60                 | 63.33             | 3480                   | 1.9            |                                                                                     |                                                                                     |
|                         | 26.7                      | 81                     | 50                 | 52.48             | 3270                   | 1.9            |                                                                                     |                                                                                     |
|                         | 23.1                      | 95                     | 60                 | 60.89             | 3430                   | 2.1            | WKM63B                                                                              | 71B5/B14-4                                                                          |
|                         | 28.7                      | 76                     | 50                 | 48.45             | 3190                   | 2.6            |                                                                                     |                                                                                     |
|                         | 36                        | 62                     | 40                 | 39.29             | 2970                   | 2.9            |                                                                                     |                                                                                     |
|                         | 46                        | 48                     | 30                 | 30.15             | 2720                   | 4.2            |                                                                                     |                                                                                     |
|                         | 14.2                      | 151                    | 60                 | 63.33             | 4030                   | 1.2            | WKM63C                                                                              | 71B5/B14-6                                                                          |
|                         | 17.1                      | 125                    | 50                 | 52.48             | 3790                   | 1.2            |                                                                                     |                                                                                     |
|                         | 14.9                      | 148                    | 60                 | 60.89             | 3970                   | 1.4            | WKM63B                                                                              | 71B5/B14-6                                                                          |
|                         | 18.5                      | 119                    | 50                 | 48.45             | 3690                   | 1.7            |                                                                                     |                                                                                     |
|                         | 22.9                      | 96                     | 40                 | 39.29             | 3440                   | 1.9            |                                                                                     |                                                                                     |
|                         | 29.7                      | 74                     | 30                 | 30.15             | 3150                   | 2.7            |                                                                                     |                                                                                     |
|                         | 37                        | 60                     | 25                 | 24.44             | 2930                   | 3.0            |                                                                                     |                                                                                     |
|                         | 44                        | 49                     | 20                 | 20.25             | 2760                   | 3.0            |                                                                                     |                                                                                     |
|                         | 9.4                       | 228                    | 300                | 295.18            | 6320                   | 1.5            | WKM75C                                                                              | 63B5-2                                                                              |
|                         | 11.6                      | 185                    | 250                | 240.89            | 5890                   | 1.9            |                                                                                     |                                                                                     |
|                         | 14.0                      | 154                    | 200                | 200.66            | 5540                   | 1.9            |                                                                                     |                                                                                     |
|                         | 18.5                      | 116                    | 150                | 149.29            | 5040                   | 3.0            |                                                                                     |                                                                                     |
|                         | 22.2                      | 97                     | 125                | 121.02            | 4750                   | 3.1            |                                                                                     |                                                                                     |
|                         | 5.8                       | 370                    | 250                | 240.89            | 6500                   | 0.95           | WKM75C                                                                              | 71B5-4                                                                              |
|                         | 7.0                       | 308                    | 200                | 200.66            | 6500                   | 0.97           |                                                                                     |                                                                                     |
|                         | 9.3                       | 232                    | 150                | 149.29            | 6500                   | 1.5            |                                                                                     |                                                                                     |
|                         | 11.1                      | 193                    | 125                | 121.02            | 5980                   | 1.6            |                                                                                     |                                                                                     |
|                         | 14.1                      | 152                    | 100                | 100.81            | 5520                   | 1.6            |                                                                                     |                                                                                     |
|                         | 18.6                      | 116                    | 75                 | 79.46             | 5040                   | 1.7            |                                                                                     |                                                                                     |
|                         | 22.4                      | 96                     | 60                 | 62.43             | 4730                   | 3.1            |                                                                                     |                                                                                     |
|                         | 6.0                       | 361                    | 150                | 149.29            | 6500                   | 0.97           | WKM75C                                                                              | 71B5-6                                                                              |
|                         | 7.1                       | 301                    | 125                | 121.02            | 6500                   | 1.0            |                                                                                     |                                                                                     |
|                         | 9.1                       | 237                    | 100                | 100.81            | 6400                   | 1.0            |                                                                                     |                                                                                     |
|                         | 11.9                      | 180                    | 75                 | 79.46             | 5840                   | 1.1            |                                                                                     |                                                                                     |
|                         | 14.4                      | 149                    | 60                 | 62.43             | 5480                   | 2.0            |                                                                                     |                                                                                     |
|                         | 18.3                      | 117                    | 50                 | 49.18             | 5060                   | 2.0            |                                                                                     |                                                                                     |
|                         | 15.1                      | 145                    | 60                 | 59.04             | 5390                   | 2.4            | WKM75B                                                                              | 71B5-6                                                                              |
|                         | 18.7                      | 118                    | 50                 | 48.18             | 5030                   | 3.0            |                                                                                     |                                                                                     |
|                         | 22.4                      | 98                     | 40                 | 40.13             | 4730                   | 3.1            |                                                                                     |                                                                                     |
|                         | 9.5                       | 227                    | 300                | 295.18            | 7990                   | 2.2            | WKM90C                                                                              | 63B5-2                                                                              |
|                         | 11.6                      | 185                    | 250                | 240.89            | 7470                   | 2.7            |                                                                                     |                                                                                     |
|                         | 14.0                      | 154                    | 200                | 200.66            | 7030                   | 3.1            |                                                                                     |                                                                                     |
|                         | 18.5                      | 116                    | 150                | 151.20            | 6390                   | 4.3            |                                                                                     |                                                                                     |
|                         | 4.7                       | 453                    | 300                | 295.18            | 8300                   | 1.1            | WKM90C                                                                              | 71B5-4                                                                              |
|                         | 5.8                       | 370                    | 250                | 240.89            | 8300                   | 1.4            |                                                                                     |                                                                                     |
|                         | 7.0                       | 308                    | 200                | 200.66            | 8300                   | 1.6            |                                                                                     |                                                                                     |
|                         | 9.3                       | 232                    | 150                | 151.20            | 8050                   | 2.2            |                                                                                     |                                                                                     |
|                         | 11.1                      | 193                    | 125                | 125.95            | 7580                   | 2.5            |                                                                                     |                                                                                     |
|                         | 14.1                      | 152                    | 100                | 99.22             | 7000                   | 2.5            |                                                                                     |                                                                                     |
|                         | 18.6                      | 116                    | 75                 | 75.45             | 6390                   | 2.6            |                                                                                     |                                                                                     |

| $P_{1n}$<br>[kW] | $n_2$<br>[r/min] | $M_2$<br>[Nm] | $i$<br>公称<br>Nominal | $i$<br>实际<br>Actual | $F_{r2}$<br>[N] | $f_B$ |  |  |
|------------------|------------------|---------------|----------------------|---------------------|-----------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.25             | 4.5              | 479           | 200                  | 200.66              | 8300            | 1.0   | WKM90C                                                                              | 71B5-6                                                                              |
|                  | 6.0              | 361           | 150                  | 151.20              | 8300            | 1.4   |                                                                                     |                                                                                     |
|                  | 7.1              | 301           | 125                  | 125.95              | 8300            | 1.6   |                                                                                     |                                                                                     |
|                  | 9.1              | 237           | 100                  | 99.22               | 8110            | 1.6   |                                                                                     |                                                                                     |
|                  | 11.9             | 180           | 75                   | 75.45               | 7400            | 1.7   |                                                                                     |                                                                                     |
|                  | 14.4             | 149           | 60                   | 62.43               | 6950            | 3.2   |                                                                                     |                                                                                     |
|                  | 18.3             | 117           | 50                   | 49.18               | 6420            | 3.2   |                                                                                     |                                                                                     |
|                  | 15.2             | 144           | 60                   | 59.04               | 6820            | 3.5   | WKM90B                                                                              | 71B5-6                                                                              |
|                  | 18.7             | 118           | 50                   | 48.18               | 6370            | 4.3   |                                                                                     |                                                                                     |
| 0.37             | 23.3             | 137           | 125                  | 120.34              | 2990            | 0.95  | WKM50C                                                                              | 71B5/B14-2                                                                          |
|                  | 27.7             | 115           | 100                  | 101.04              | 2820            | 0.87  |                                                                                     |                                                                                     |
|                  | 38               | 85            | 75                   | 74.62               | 2550            | 0.94  |                                                                                     |                                                                                     |
|                  | 45               | 71            | 60                   | 62.36               | 2400            | 1.8   |                                                                                     |                                                                                     |
|                  | 53               | 59            | 50                   | 52.36               | 2270            | 1.7   |                                                                                     |                                                                                     |
|                  | 48               | 67            | 60                   | 58.36               | 2350            | 1.9   | WKM50B                                                                              | 71B5/B14-2                                                                          |
|                  | 57               | 57            | 50                   | 48.86               | 2220            | 2.2   |                                                                                     |                                                                                     |
|                  | 70               | 47            | 40                   | 40.09               | 2070            | 2.7   |                                                                                     |                                                                                     |
|                  | 95               | 34            | 30                   | 29.33               | 1870            | 3.7   |                                                                                     |                                                                                     |
|                  | 28.7             | 113           | 50                   | 48.86               | 2790            | 1.1   | WKM50B                                                                              | 71B5/B14-4                                                                          |
|                  | 35               | 93            | 40                   | 40.09               | 2610            | 1.4   |                                                                                     |                                                                                     |
|                  | 48               | 68            | 30                   | 29.33               | 2350            | 1.9   |                                                                                     |                                                                                     |
|                  | 58               | 56            | 25                   | 24.07               | 2200            | 2.3   |                                                                                     |                                                                                     |
|                  | 69               | 47            | 20                   | 20.21               | 2080            | 2.1   |                                                                                     |                                                                                     |
|                  | 94               | 35            | 15                   | 14.92               | 1880            | 2.3   |                                                                                     |                                                                                     |
|                  | 112              | 29            | 12.5                 | 12.47               | 1770            | 4.5   |                                                                                     |                                                                                     |
|                  | 134              | 24            | 10                   | 10.47               | 1670            | 4.1   |                                                                                     |                                                                                     |
|                  | 181              | 18            | 7.5                  | 7.73                | 1510            | 4.5   |                                                                                     |                                                                                     |
|                  | 31               | 106           | 30                   | 29.33               | 2730            | 1.2   | WKM50B                                                                              | 80B5/B14-6                                                                          |
|                  | 37               | 87            | 25                   | 24.07               | 2550            | 1.5   |                                                                                     |                                                                                     |
|                  | 45               | 73            | 20                   | 20.21               | 2410            | 1.4   |                                                                                     |                                                                                     |
|                  | 60               | 54            | 15                   | 14.92               | 2180            | 1.5   |                                                                                     |                                                                                     |
|                  | 72               | 45            | 12.5                 | 12.47               | 2050            | 2.9   |                                                                                     |                                                                                     |
|                  | 86               | 38            | 10                   | 10.47               | 1930            | 2.6   |                                                                                     |                                                                                     |
|                  | 116              | 28            | 7.5                  | 7.73                | 1750            | 2.9   |                                                                                     |                                                                                     |
|                  | 14.3             | 223           | 200                  | 196.43              | 4030            | 0.78  | WKM63C                                                                              | 71B5/B14-2                                                                          |
|                  | 18.5             | 172           | 150                  | 150.74              | 3690            | 1.2   |                                                                                     |                                                                                     |
|                  | 22.9             | 139           | 125                  | 122.22              | 3440            | 1.3   |                                                                                     |                                                                                     |
|                  | 27.6             | 115           | 100                  | 101.27              | 3230            | 1.3   |                                                                                     |                                                                                     |
|                  | 38               | 83            | 75                   | 73.33               | 2900            | 1.3   |                                                                                     |                                                                                     |
|                  | 44               | 72            | 60                   | 63.33               | 2760            | 2.5   |                                                                                     |                                                                                     |
|                  | 53               | 60            | 50                   | 52.48               | 2590            | 2.5   |                                                                                     |                                                                                     |
|                  | 46               | 70.5          | 60                   | 60.89               | 2720            | 2.7   | WKM63B                                                                              | 71B5/B14-2                                                                          |
|                  | 57               | 57            | 50                   | 48.45               | 2530            | 3.5   |                                                                                     |                                                                                     |
|                  | 71               | 46            | 40                   | 39.29               | 2350            | 3.8   |                                                                                     |                                                                                     |
|                  | 22.1             | 144           | 60                   | 63.33               | 3480            | 1.3   | WKM63C                                                                              | 71B5/B14-4                                                                          |
|                  | 26.7             | 119           | 50                   | 52.48               | 3270            | 1.3   |                                                                                     |                                                                                     |
|                  | 23.1             | 140           | 60                   | 60.89               | 3430            | 1.4   | WKM63B                                                                              | 71B5/B14-4                                                                          |
|                  | 28.7             | 113           | 50                   | 48.45               | 3190            | 1.8   |                                                                                     |                                                                                     |
|                  | 36               | 91            | 40                   | 39.29               | 2970            | 2.0   |                                                                                     |                                                                                     |
|                  | 46               | 70            | 30                   | 30.15               | 2720            | 2.8   |                                                                                     |                                                                                     |
|                  | 57               | 57            | 25                   | 24.44               | 2530            | 3.2   |                                                                                     |                                                                                     |
|                  | 69               | 47            | 20                   | 20.25               | 2380            | 3.2   |                                                                                     |                                                                                     |
|                  | 18.5             | 176           | 50                   | 48.45               | 3690            | 1.1   | WKM63B                                                                              | 80B5/B14-6                                                                          |
|                  | 22.9             | 142           | 40                   | 39.29               | 3440            | 1.3   |                                                                                     |                                                                                     |
|                  | 29.7             | 109           | 30                   | 30.15               | 3150            | 1.8   |                                                                                     |                                                                                     |

| $P_{1n}$<br>[kW] | $n_2$<br>[r/min] | $M_2$<br>[Nm] | $i$<br>公称<br>Nominal | $i$<br>实际<br>Actual | $F_{r2}$<br>[N] | $f_B$ |  |  |
|------------------|------------------|---------------|----------------------|---------------------|-----------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.37             | 37               | 88            | 25                   | 24.44               | 2930            | 2.0   | WKM63B                                                                              | 80B5/B14-6                                                                          |
|                  | 44               | 73            | 20                   | 20.25               | 2760            | 2.1   |                                                                                     |                                                                                     |
|                  | 61               | 53            | 15                   | 14.67               | 2470            | 2.1   |                                                                                     |                                                                                     |
|                  | 71               | 46            | 12.5                 | 12.67               | 2360            | 3.9   |                                                                                     |                                                                                     |
|                  | 86               | 38            | 10                   | 10.50               | 2210            | 4.0   |                                                                                     |                                                                                     |
|                  | 118              | 27            | 7.5                  | 7.60                | 1990            | 4.0   | WKM75C                                                                              | 71B5-2                                                                              |
|                  | 9.4              | 338           | 300                  | 295.18              | 6320            | 1.0   |                                                                                     |                                                                                     |
|                  | 11.6             | 274           | 250                  | 240.89              | 5890            | 1.3   |                                                                                     |                                                                                     |
|                  | 14.0             | 228           | 200                  | 200.66              | 5540            | 1.3   |                                                                                     |                                                                                     |
|                  | 18.5             | 172           | 150                  | 149.29              | 5040            | 2.0   |                                                                                     |                                                                                     |
|                  | 22.2             | 143           | 125                  | 121.02              | 4750            | 2.1   |                                                                                     |                                                                                     |
|                  | 28.2             | 113           | 100                  | 100.81              | 4380            | 2.1   |                                                                                     |                                                                                     |
|                  | 37               | 86            | 75                   | 79.41               | 4000            | 2.3   | WKM75C                                                                              | 71B5-4                                                                              |
|                  | 9.3              | 343           | 150                  | 149.29              | 6500            | 1.0   |                                                                                     |                                                                                     |
|                  | 11.1             | 286           | 125                  | 121.02              | 5980            | 1.0   |                                                                                     |                                                                                     |
|                  | 14.1             | 225           | 100                  | 100.81              | 5520            | 1.1   |                                                                                     |                                                                                     |
|                  | 18.6             | 171           | 75                   | 79.41               | 5040            | 1.2   |                                                                                     |                                                                                     |
|                  | 22.4             | 142           | 60                   | 62.43               | 4730            | 2.1   |                                                                                     |                                                                                     |
|                  | 28.5             | 112           | 50                   | 49.18               | 4370            | 2.1   |                                                                                     |                                                                                     |
|                  | 23.6             | 138           | 60                   | 59.04               | 4660            | 2.5   | WKM75B                                                                              | 71B5-4                                                                              |
|                  | 29.1             | 112           | 50                   | 48.18               | 4340            | 3.1   |                                                                                     |                                                                                     |
|                  | 35               | 93            | 40                   | 40.13               | 4080            | 3.2   |                                                                                     |                                                                                     |
|                  | 14.4             | 221           | 60                   | 62.43               | 5480            | 1.4   | WKM75C                                                                              | 80B5/B14-6                                                                          |
|                  | 18.3             | 174           | 50                   | 49.18               | 5060            | 1.4   |                                                                                     |                                                                                     |
|                  | 15.1             | 215           | 60                   | 59.04               | 5390            | 1.6   | WKM75B                                                                              | 80B5/B14-6                                                                          |
|                  | 18.7             | 174           | 50                   | 48.18               | 5030            | 2.0   |                                                                                     |                                                                                     |
|                  | 22.4             | 145           | 40                   | 40.13               | 4730            | 2.1   |                                                                                     |                                                                                     |
|                  | 29.8             | 109           | 30                   | 29.66               | 4310            | 3.2   |                                                                                     |                                                                                     |
|                  | 36               | 91            | 25                   | 24.20               | 4050            | 3.3   |                                                                                     |                                                                                     |
|                  | 9.5              | 335           | 300                  | 295.18              | 7990            | 1.5   | WKM90C                                                                              | 71B5-2                                                                              |
|                  | 11.6             | 274           | 250                  | 240.89              | 7470            | 1.8   |                                                                                     |                                                                                     |
|                  | 14.0             | 228           | 200                  | 200.66              | 7030            | 2.1   |                                                                                     |                                                                                     |
|                  | 18.5             | 172           | 150                  | 151.20              | 6390            | 2.8   |                                                                                     |                                                                                     |
|                  | 22.2             | 143           | 125                  | 125.95              | 6010            | 3.4   |                                                                                     |                                                                                     |
|                  | 5.8              | 547           | 250                  | 240.89              | 8300            | 0.9   | WKM90C                                                                              | 71B5-4                                                                              |
|                  | 7.0              | 456           | 200                  | 200.66              | 8300            | 1.1   |                                                                                     |                                                                                     |
|                  | 9.3              | 343           | 150                  | 151.20              | 8050            | 1.5   |                                                                                     |                                                                                     |
|                  | 11.1             | 286           | 125                  | 125.95              | 7580            | 1.7   |                                                                                     |                                                                                     |
|                  | 14.1             | 225           | 100                  | 99.22               | 7000            | 1.7   |                                                                                     |                                                                                     |
|                  | 18.6             | 171           | 75                   | 75.45               | 6390            | 1.8   |                                                                                     |                                                                                     |
|                  | 22.4             | 142           | 60                   | 62.43               | 6000            | 3.4   |                                                                                     |                                                                                     |
|                  | 28.5             | 112           | 50                   | 49.18               | 5540            | 3.4   |                                                                                     |                                                                                     |
|                  | 23.7             | 137           | 60                   | 59.04               | 5890            | 3.6   | WKM90B                                                                              | 71B5-4                                                                              |
|                  | 29.1             | 112           | 50                   | 48.18               | 5500            | 4.5   |                                                                                     |                                                                                     |
|                  | 6.0              | 534           | 150                  | 151.20              | 8300            | 0.94  | WKM90C                                                                              | 80B5/B14-6                                                                          |
|                  | 7.1              | 445           | 125                  | 125.95              | 8300            | 1.1   |                                                                                     |                                                                                     |
|                  | 9.1              | 351           | 100                  | 99.22               | 8110            | 1.1   |                                                                                     |                                                                                     |
|                  | 11.9             | 267           | 75                   | 75.45               | 7400            | 1.1   |                                                                                     |                                                                                     |
|                  | 14.4             | 221           | 60                   | 62.43               | 6950            | 2.2   |                                                                                     |                                                                                     |
|                  | 18.3             | 174           | 50                   | 49.18               | 6420            | 2.2   |                                                                                     |                                                                                     |
|                  | 15.2             | 213           | 60                   | 59.04               | 6820            | 2.3   | WKM90B                                                                              | 80B5/B14-6                                                                          |
|                  | 18.7             | 174           | 50                   | 48.18               | 6370            | 2.9   |                                                                                     |                                                                                     |
|                  | 22.4             | 145           | 40                   | 40.13               | 6000            | 3.3   |                                                                                     |                                                                                     |
| 0.55             | 38               | 126           | 75                   | 74.62               | 2550            | 0.77  | WKM50C                                                                              | 71B5/B14-2                                                                          |
|                  | 45               | 105           | 60                   | 62.36               | 2400            | 1.2   |                                                                                     |                                                                                     |
|                  | 53               | 88            | 50                   | 52.36               | 2270            | 1.1   |                                                                                     |                                                                                     |

| $P_{1n}$<br>[kW] | $n_2$<br>[r/min] | $M_2$<br>[Nm] | $i$<br>公称<br>Nominal | $i$<br>实际<br>Actual | $F_{r2}$<br>[N] | $f_B$ |  |  |
|------------------|------------------|---------------|----------------------|---------------------|-----------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.55             | 48               | 101           | 60                   | 58.36               | 2350            | 1.26  | WKM50B                                                                              | 71B5/B14-2                                                                          |
|                  | 57               | 84            | 50                   | 48.86               | 2220            | 1.5   |                                                                                     |                                                                                     |
|                  | 70               | 69            | 40                   | 40.09               | 2070            | 1.8   |                                                                                     |                                                                                     |
|                  | 95               | 51            | 30                   | 29.33               | 1870            | 2.5   |                                                                                     |                                                                                     |
|                  | 116              | 41            | 25                   | 24.07               | 1750            | 3.1   |                                                                                     |                                                                                     |
|                  | 139              | 35            | 20                   | 20.21               | 1650            | 2.7   |                                                                                     |                                                                                     |
|                  | 35               | 138           | 40                   | 40.09               | 2610            | 0.9   | WKM50B                                                                              | 80B5/B14-4                                                                          |
|                  | 48               | 101           | 30                   | 29.33               | 2350            | 1.3   |                                                                                     |                                                                                     |
|                  | 58               | 83            | 25                   | 24.07               | 2200            | 1.6   |                                                                                     |                                                                                     |
|                  | 69               | 70            | 20                   | 20.21               | 2080            | 1.4   |                                                                                     |                                                                                     |
|                  | 94               | 51            | 15                   | 14.92               | 1880            | 1.6   |                                                                                     |                                                                                     |
|                  | 112              | 43            | 12.5                 | 12.47               | 1770            | 3.0   |                                                                                     |                                                                                     |
|                  | 134              | 36            | 10                   | 10.47               | 1670            | 2.8   | WKM50B                                                                              | 80B5/B14-6                                                                          |
|                  | 181              | 27            | 7.5                  | 7.73                | 1510            | 3.0   |                                                                                     |                                                                                     |
|                  | 37               | 129           | 25                   | 24.07               | 2550            | 1.0   |                                                                                     |                                                                                     |
|                  | 45               | 109           | 20                   | 20.21               | 2410            | 0.92  |                                                                                     |                                                                                     |
|                  | 60               | 80            | 15                   | 14.92               | 2180            | 1.0   |                                                                                     |                                                                                     |
|                  | 72               | 67            | 12.5                 | 12.47               | 2050            | 1.9   |                                                                                     |                                                                                     |
|                  | 86               | 56            | 10                   | 10.47               | 1930            | 1.8   | WKM63C                                                                              | 71B5/B14-2                                                                          |
|                  | 116              | 42            | 7.5                  | 7.73                | 1750            | 1.9   |                                                                                     |                                                                                     |
|                  | 22.9             | 206           | 125                  | 122.22              | 3440            | 0.9   |                                                                                     |                                                                                     |
|                  | 27.6             | 171           | 100                  | 101.27              | 3230            | 0.9   |                                                                                     |                                                                                     |
|                  | 38               | 124           | 75                   | 73.33               | 2900            | 0.9   |                                                                                     |                                                                                     |
|                  | 44               | 107           | 60                   | 63.33               | 2760            | 1.7   |                                                                                     |                                                                                     |
|                  | 53               | 89            | 50                   | 52.48               | 2590            | 1.7   | WKM63B                                                                              | 71B5/B14-2                                                                          |
|                  | 46               | 105           | 60                   | 60.89               | 2720            | 1.86  |                                                                                     |                                                                                     |
|                  | 57               | 84            | 50                   | 48.45               | 2530            | 2.3   |                                                                                     |                                                                                     |
|                  | 71               | 67.5          | 40                   | 39.29               | 2350            | 2.6   |                                                                                     |                                                                                     |
|                  | 92               | 52            | 30                   | 30.15               | 2160            | 3.7   | WKM63B                                                                              | 80B5/B14-4                                                                          |
|                  | 28.7             | 168           | 50                   | 48.45               | 3190            | 1.2   |                                                                                     |                                                                                     |
|                  | 36               | 136           | 40                   | 39.29               | 2970            | 1.3   |                                                                                     |                                                                                     |
|                  | 46               | 105           | 30                   | 30.15               | 2720            | 1.9   |                                                                                     |                                                                                     |
|                  | 57               | 84            | 25                   | 24.44               | 2530            | 2.1   |                                                                                     |                                                                                     |
|                  | 69               | 70            | 20                   | 20.25               | 2380            | 2.1   |                                                                                     |                                                                                     |
|                  | 95               | 51            | 15                   | 14.67               | 2130            | 2.2   |                                                                                     |                                                                                     |
|                  | 100              | 44            | 12.5                 | 12.67               | 2030            | 4.1   |                                                                                     |                                                                                     |
|                  | 133              | 36            | 10                   | 10.50               | 1910            | 4.1   | WKM63B                                                                              | 80B5/B14-6                                                                          |
|                  | 184              | 26            | 7.5                  | 7.60                | 1710            | 4.2   |                                                                                     |                                                                                     |
|                  | 22.9             | 211           | 40                   | 39.29               | 3440            | 0.9   |                                                                                     |                                                                                     |
|                  | 29.7             | 163           | 30                   | 30.15               | 3150            | 1.2   |                                                                                     |                                                                                     |
|                  | 37               | 131           | 25                   | 24.44               | 2930            | 1.4   |                                                                                     |                                                                                     |
|                  | 44               | 109           | 20                   | 20.25               | 2760            | 1.4   |                                                                                     |                                                                                     |
|                  | 61               | 79            | 15                   | 14.67               | 2470            | 1.4   |                                                                                     |                                                                                     |
|                  | 71               | 68            | 12.5                 | 12.67               | 2360            | 2.6   |                                                                                     |                                                                                     |
|                  | 86               | 58            | 10                   | 10.50               | 2210            | 2.7   | WKM75C                                                                              | 71B5-2                                                                              |
|                  | 118              | 41            | 7.5                  | 7.60                | 1990            | 2.7   |                                                                                     |                                                                                     |
|                  | 14.0             | 339           | 200                  | 200.66              | 5540            | 0.89  |                                                                                     |                                                                                     |
|                  | 18.5             | 255           | 150                  | 149.29              | 5040            | 1.4   |                                                                                     |                                                                                     |
|                  | 22.2             | 213           | 125                  | 121.02              | 4750            | 1.4   |                                                                                     |                                                                                     |
|                  | 28.2             | 168           | 100                  | 100.81              | 4380            | 1.4   |                                                                                     |                                                                                     |
|                  | 37               | 127           | 75                   | 79.46               | 4000            | 1.6   |                                                                                     |                                                                                     |
|                  | 45               | 105           | 60                   | 62.43               | 3750            | 2.8   |                                                                                     |                                                                                     |
|                  | 57               | 83            | 50                   | 49.18               | 3470            | 2.9   | WKM75B                                                                              | 71B5-2                                                                              |
|                  | 47               | 103           | 60                   | 59.04               | 3690            | 3.3   |                                                                                     |                                                                                     |
|                  | 58               | 83            | 50                   | 48.18               | 3440            | 4.1   | WKM75C                                                                              | 80B5/B14-4                                                                          |
|                  | 14.1             | 334           | 100                  | 100.81              | 5520            | 0.7   |                                                                                     |                                                                                     |
|                  | 18.6             | 255           | 50                   | 79.46               | 5040            | 0.79  |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.55                    | 22.4                      | 211                    | 60                 | 62.43             | 4730                   | 1.4            | WKM75C                                                                              | 80B5/B14-4                                                                          |
|                         | 28.5                      | 166                    | 50                 | 49.18             | 4370                   | 1.4            |                                                                                     |                                                                                     |
|                         | 23.6                      | 205                    | 60                 | 59.04             | 4660                   | 1.7            | WKM75B                                                                              | 80B5/B14-4                                                                          |
|                         | 29.1                      | 166                    | 50                 | 48.18             | 4340                   | 2.1            |                                                                                     |                                                                                     |
|                         | 35                        | 139                    | 40                 | 40.13             | 4080                   | 2.2            |                                                                                     |                                                                                     |
|                         | 46                        | 104                    | 30                 | 29.66             | 3720                   | 3.4            |                                                                                     |                                                                                     |
|                         | 56                        | 87                     | 25                 | 24.20             | 3500                   | 3.5            |                                                                                     |                                                                                     |
|                         | 14.4                      | 328                    | 60                 | 62.43             | 5480                   | 0.91           | WKM75C                                                                              | 80B5/B14-6                                                                          |
|                         | 18.3                      | 258                    | 50                 | 49.18             | 5060                   | 0.93           |                                                                                     |                                                                                     |
|                         | 15.1                      | 319                    | 60                 | 59.04             | 5390                   | 1.1            | WKM75B                                                                              | 80B5/B14-6                                                                          |
|                         | 18.7                      | 259                    | 50                 | 48.18             | 5030                   | 1.4            |                                                                                     |                                                                                     |
|                         | 22.4                      | 215                    | 40                 | 40.13             | 4730                   | 1.4            |                                                                                     |                                                                                     |
|                         | 29.8                      | 162                    | 30                 | 29.66             | 4310                   | 2.2            |                                                                                     |                                                                                     |
|                         | 36                        | 135                    | 25                 | 24.20             | 4050                   | 2.2            |                                                                                     |                                                                                     |
|                         | 45                        | 107                    | 20                 | 20.16             | 3740                   | 2.3            |                                                                                     |                                                                                     |
|                         | 60                        | 81                     | 15                 | 15.88             | 3410                   | 2.5            |                                                                                     |                                                                                     |
|                         | 9.5                       | 498                    | 300                | 295.18            | 7990                   | 1.0            | WKM90C                                                                              | 71B5-2                                                                              |
|                         | 11.6                      | 407                    | 250                | 240.89            | 7470                   | 1.2            |                                                                                     |                                                                                     |
|                         | 14.0                      | 339                    | 200                | 200.66            | 7030                   | 1.4            |                                                                                     |                                                                                     |
|                         | 18.5                      | 255                    | 150                | 151.20            | 6390                   | 2.0            |                                                                                     |                                                                                     |
|                         | 22.2                      | 213                    | 125                | 125.95            | 6010                   | 2.3            |                                                                                     |                                                                                     |
|                         | 28.2                      | 168                    | 100                | 99.22             | 5550                   | 2.3            |                                                                                     |                                                                                     |
|                         | 37                        | 127                    | 75                 | 75.45             | 5070                   | 2.4            |                                                                                     |                                                                                     |
|                         | 45                        | 105                    | 60                 | 62.43             | 4760                   | 4.6            |                                                                                     |                                                                                     |
|                         | 57                        | 83                     | 50                 | 49.18             | 4390                   | 4.6            |                                                                                     |                                                                                     |
|                         | 9.3                       | 511                    | 150                | 151.20            | 8050                   | 1.0            | WKM90C                                                                              | 80B5/B14-4                                                                          |
|                         | 11.1                      | 425                    | 125                | 125.95            | 7580                   | 1.1            |                                                                                     |                                                                                     |
|                         | 14.1                      | 335                    | 100                | 99.22             | 7000                   | 1.1            |                                                                                     |                                                                                     |
|                         | 18.6                      | 255                    | 75                 | 75.45             | 6390                   | 1.2            |                                                                                     |                                                                                     |
|                         | 22.4                      | 211                    | 60                 | 62.43             | 6000                   | 2.3            |                                                                                     |                                                                                     |
|                         | 28.5                      | 166                    | 50                 | 49.18             | 5540                   | 2.3            |                                                                                     |                                                                                     |
|                         | 23.7                      | 204                    | 60                 | 59.04             | 5890                   | 2.5            | WKM90B                                                                              | 80B5/B14-4                                                                          |
|                         | 29.1                      | 166                    | 50                 | 48.18             | 5500                   | 3.0            |                                                                                     |                                                                                     |
|                         | 35                        | 139                    | 40                 | 40.13             | 5170                   | 3.5            |                                                                                     |                                                                                     |
|                         | 9.1                       | 521                    | 100                | 99.22             | 8110                   | 0.71           | WKM90C                                                                              | 80B5/B14-6                                                                          |
|                         | 11.9                      | 396                    | 75                 | 75.45             | 7400                   | 0.74           |                                                                                     |                                                                                     |
|                         | 14.4                      | 328                    | 60                 | 62.43             | 6950                   | 1.5            |                                                                                     |                                                                                     |
|                         | 18.3                      | 258                    | 50                 | 49.18             | 6420                   | 1.5            |                                                                                     |                                                                                     |
|                         | 15.2                      | 317                    | 60                 | 59.04             | 6820                   | 1.6            | WKM90B                                                                              | 80B5/B14-6                                                                          |
|                         | 18.7                      | 259                    | 50                 | 48.18             | 6370                   | 1.9            |                                                                                     |                                                                                     |
|                         | 22.4                      | 215                    | 40                 | 40.13             | 6000                   | 2.2            |                                                                                     |                                                                                     |
|                         | 29.8                      | 162                    | 30                 | 30.24             | 5460                   | 3.1            |                                                                                     |                                                                                     |
|                         | 36                        | 135                    | 25                 | 25.19             | 5130                   | 3.5            |                                                                                     |                                                                                     |
|                         | 57                        | 114.5                  | 50                 | 48.86             | 2220                   | 1.1            | WKM50B                                                                              | 80B5/B14-2                                                                          |
| 0.75                    | 70                        | 94                     | 40                 | 40.09             | 2070                   | 1.3            |                                                                                     |                                                                                     |
|                         | 95                        | 69                     | 30                 | 29.33             | 1870                   | 1.8            |                                                                                     |                                                                                     |
|                         | 116                       | 57                     | 25                 | 24.07             | 1750                   | 2.2            |                                                                                     |                                                                                     |
|                         | 139                       | 48                     | 20                 | 20.21             | 1650                   | 2.0            |                                                                                     |                                                                                     |
|                         | 188                       | 35                     | 15                 | 14.92             | 1490                   | 2.2            |                                                                                     |                                                                                     |
|                         | 48                        | 138                    | 30                 | 29.33             | 2350                   | 0.9            |                                                                                     | 80B5/B14-4                                                                          |
|                         | 58                        | 113                    | 25                 | 24.07             | 2200                   | 1.1            |                                                                                     |                                                                                     |
|                         | 69                        | 95                     | 20                 | 20.21             | 2080                   | 1.1            |                                                                                     |                                                                                     |
|                         | 94                        | 70                     | 15                 | 14.92             | 1880                   | 1.1            |                                                                                     |                                                                                     |
|                         | 112                       | 59                     | 12.5               | 12.47             | 1770                   | 2.2            |                                                                                     |                                                                                     |
|                         | 134                       | 49                     | 10                 | 10.47             | 1670                   | 2.0            |                                                                                     |                                                                                     |
|                         | 181                       | 36                     | 7.5                | 7.73              | 1510                   | 2.2            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.75                    | 60                        | 110                    | 15                 | 14.92             | 2180                   | 0.71           | WKM50B                                                                              | 90B5/B14-6                                                                          |
|                         | 72                        | 91                     | 12.5               | 12.47             | 2050                   | 1.4            |                                                                                     |                                                                                     |
|                         | 86                        | 77                     | 10                 | 10.47             | 1930                   | 1.3            |                                                                                     |                                                                                     |
|                         | 116                       | 57                     | 7.5                | 7.73              | 1750                   | 1.4            |                                                                                     |                                                                                     |
|                         | 38                        | 169                    | 75                 | 73.33             | 2900                   | 0.63           | WKM63C                                                                              | 80B5/B14-2                                                                          |
|                         | 44                        | 146                    | 60                 | 63.33             | 2760                   | 1.2            |                                                                                     |                                                                                     |
|                         | 53                        | 121                    | 50                 | 52.48             | 2590                   | 1.2            |                                                                                     |                                                                                     |
|                         | 46                        | 142                    | 60                 | 60.89             | 2720                   | 1.38           | WKM63B                                                                              | 80B5/B14-2                                                                          |
|                         | 57                        | 114.5                  | 50                 | 48.45             | 2530                   | 1.7            |                                                                                     |                                                                                     |
|                         | 71                        | 92                     | 40                 | 39.29             | 2350                   | 1.9            |                                                                                     |                                                                                     |
|                         | 92                        | 71                     | 30                 | 30.15             | 2160                   | 2.7            |                                                                                     |                                                                                     |
|                         | 115                       | 58                     | 25                 | 24.44             | 2010                   | 3.0            |                                                                                     |                                                                                     |
|                         | 138                       | 48                     | 20                 | 20.25             | 1890                   | 3.0            |                                                                                     |                                                                                     |
|                         | 28.7                      | 229                    | 50                 | 48.45             | 3190                   | 0.9            | WKM63B                                                                              | 80B5/B14-4                                                                          |
|                         | 36                        | 185                    | 40                 | 39.29             | 2970                   | 1.0            |                                                                                     |                                                                                     |
|                         | 46                        | 143                    | 30                 | 30.15             | 2720                   | 1.4            |                                                                                     |                                                                                     |
|                         | 57                        | 115                    | 25                 | 24.44             | 2530                   | 1.6            |                                                                                     |                                                                                     |
|                         | 69                        | 95                     | 20                 | 20.25             | 2360                   | 1.6            |                                                                                     |                                                                                     |
|                         | 95                        | 69                     | 15                 | 14.67             | 2130                   | 1.6            |                                                                                     |                                                                                     |
|                         | 110                       | 60                     | 12.5               | 12.67             | 2030                   | 3.0            |                                                                                     |                                                                                     |
|                         | 133                       | 49                     | 10                 | 10.50             | 1910                   | 3.0            |                                                                                     |                                                                                     |
|                         | 184                       | 36                     | 7.5                | 7.60              | 1710                   | 3.1            |                                                                                     |                                                                                     |
|                         | 37                        | 179                    | 25                 | 24.44             | 2930                   | 1.0            | WKM63B                                                                              | 90B5/B14-6                                                                          |
|                         | 44                        | 148                    | 20                 | 20.25             | 2760                   | 1.0            |                                                                                     |                                                                                     |
|                         | 61                        | 107                    | 15                 | 14.67             | 2470                   | 1.0            |                                                                                     |                                                                                     |
|                         | 71                        | 93                     | 12.5               | 12.67             | 2360                   | 1.9            |                                                                                     |                                                                                     |
|                         | 86                        | 77                     | 10                 | 10.50             | 2210                   | 2.0            |                                                                                     |                                                                                     |
|                         | 118                       | 56                     | 7.5                | 7.60              | 1990                   | 2.0            |                                                                                     |                                                                                     |
|                         | 18.5                      | 348                    | 150                | 149.29            | 5040                   | 1.0            | WKM75C                                                                              | 80B5/B14-2                                                                          |
|                         | 22.2                      | 290                    | 125                | 121.02            | 4750                   | 1.0            |                                                                                     |                                                                                     |
|                         | 28.2                      | 228                    | 100                | 100.81            | 4380                   | 1.1            |                                                                                     |                                                                                     |
|                         | 37                        | 174                    | 75                 | 79.41             | 4000                   | 1.2            |                                                                                     |                                                                                     |
|                         | 45                        | 144                    | 60                 | 62.43             | 3750                   | 2.1            |                                                                                     |                                                                                     |
|                         | 57                        | 113                    | 50                 | 49.18             | 3470                   | 2.1            |                                                                                     |                                                                                     |
|                         | 47                        | 140                    | 60                 | 59.04             | 3690                   | 2.4            | WKM75B                                                                              | 80B5/B14-2                                                                          |
|                         | 58                        | 113.5                  | 50                 | 48.18             | 3440                   | 3.0            |                                                                                     |                                                                                     |
|                         | 70                        | 94                     | 40                 | 40.13             | 3240                   | 3.1            |                                                                                     |                                                                                     |
|                         | 22.4                      | 287                    | 60                 | 62.43             | 4730                   | 1.0            | WKM75C                                                                              | 80B5/B14-4                                                                          |
|                         | 28.5                      | 226                    | 50                 | 49.18             | 4370                   | 1.1            |                                                                                     |                                                                                     |
|                         | 23.6                      | 280                    | 60                 | 59.04             | 4660                   | 1.3            | WKM75B                                                                              | 80B5/B14-4                                                                          |
|                         | 29.1                      | 227                    | 50                 | 48.18             | 4340                   | 1.5            |                                                                                     |                                                                                     |
|                         | 35                        | 189                    | 40                 | 40.13             | 4080                   | 1.6            |                                                                                     |                                                                                     |
|                         | 46                        | 142                    | 30                 | 29.66             | 3720                   | 2.5            |                                                                                     |                                                                                     |
|                         | 56                        | 119                    | 25                 | 24.20             | 3500                   | 2.5            |                                                                                     |                                                                                     |
|                         | 71                        | 93                     | 20                 | 20.16             | 3230                   | 2.8            |                                                                                     |                                                                                     |
|                         | 18.7                      | 353                    | 50                 | 48.18             | 5030                   | 1.0            | WKM75B                                                                              | 90B5/B14-6                                                                          |
|                         | 22.4                      | 294                    | 40                 | 40.13             | 4730                   | 1.0            |                                                                                     |                                                                                     |
|                         | 29.8                      | 221                    | 30                 | 29.66             | 4310                   | 1.6            |                                                                                     |                                                                                     |
|                         | 36                        | 184                    | 25                 | 24.20             | 4050                   | 1.6            |                                                                                     |                                                                                     |
|                         | 45                        | 145                    | 20                 | 19.84             | 3740                   | 1.7            |                                                                                     |                                                                                     |
|                         | 60                        | 110                    | 15                 | 15.88             | 3410                   | 1.8            |                                                                                     |                                                                                     |
|                         | 72                        | 91                     | 12.5               | 12.49             | 3210                   | 3.3            |                                                                                     |                                                                                     |
|                         | 11.6                      | 555                    | 250                | 240.89            | 7470                   | 0.9            | WKM90C                                                                              | 80B5/B14-2                                                                          |
|                         | 14.0                      | 462                    | 200                | 200.66            | 7030                   | 1.0            |                                                                                     |                                                                                     |
|                         | 18.5                      | 348                    | 150                | 151.20            | 6390                   | 1.4            |                                                                                     |                                                                                     |
|                         | 22.2                      | 290                    | 125                | 125.95            | 6010                   | 1.7            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.75                    | 28.2                      | 228                    | 100                | 99.22             | 5550                   | 1.7            | WKM90C                                                                              | 80B5/B14-2                                                                          |
|                         | 37                        | 174                    | 75                 | 75.45             | 5070                   | 1.7            |                                                                                     |                                                                                     |
|                         | 45                        | 144                    | 60                 | 62.43             | 4760                   | 3.3            |                                                                                     |                                                                                     |
|                         | 57                        | 113                    | 50                 | 49.18             | 4390                   | 3.4            |                                                                                     |                                                                                     |
|                         | 14.1                      | 457                    | 100                | 99.22             | 7000                   | 0.83           | WKM90C                                                                              | 80B5/B14-4                                                                          |
|                         | 18.6                      | 347                    | 75                 | 75.45             | 6390                   | 0.86           |                                                                                     |                                                                                     |
|                         | 22.4                      | 287                    | 60                 | 62.43             | 6000                   | 1.7            |                                                                                     |                                                                                     |
|                         | 28.5                      | 226                    | 50                 | 49.18             | 5540                   | 1.7            |                                                                                     |                                                                                     |
|                         | 23.7                      | 278                    | 60                 | 59.04             | 5890                   | 1.8            | WKM90B                                                                              | 80B5/B14-4                                                                          |
|                         | 29.1                      | 227                    | 50                 | 48.18             | 5500                   | 2.2            |                                                                                     |                                                                                     |
|                         | 35                        | 189                    | 40                 | 40.13             | 5170                   | 2.5            |                                                                                     |                                                                                     |
|                         | 46                        | 142                    | 30                 | 30.24             | 4710                   | 3.5            |                                                                                     |                                                                                     |
|                         | 56                        | 119                    | 25                 | 25.19             | 4430                   | 4.0            |                                                                                     |                                                                                     |
|                         | 14.4                      | 447                    | 60                 | 62.43             | 6950                   | 1.1            | WKM90C                                                                              | 90B5/B14-6                                                                          |
|                         | 18.3                      | 352                    | 50                 | 49.18             | 6420                   | 1.1            |                                                                                     |                                                                                     |
|                         | 15.2                      | 432                    | 60                 | 59.04             | 6820                   | 1.2            | WKM90B                                                                              | 90B5/B14-6                                                                          |
|                         | 18.7                      | 353                    | 50                 | 48.18             | 6370                   | 1.4            |                                                                                     |                                                                                     |
|                         | 22.4                      | 294                    | 40                 | 40.13             | 6000                   | 1.6            |                                                                                     |                                                                                     |
|                         | 29.8                      | 221                    | 30                 | 30.24             | 5460                   | 2.3            |                                                                                     |                                                                                     |
|                         | 36                        | 184                    | 25                 | 25.19             | 5130                   | 2.6            |                                                                                     |                                                                                     |
|                         | 45                        | 145                    | 20                 | 19.84             | 4740                   | 2.6            |                                                                                     |                                                                                     |
|                         | 60                        | 110                    | 15                 | 15.09             | 4330                   | 2.7            |                                                                                     |                                                                                     |
| 1.1                     | 70                        | 138                    | 40                 | 40.09             | 2070                   | 0.9            | WKM50B                                                                              | 80B5/B14-2                                                                          |
|                         | 95                        | 101                    | 30                 | 29.33             | 1870                   | 1.3            |                                                                                     |                                                                                     |
|                         | 116                       | 83                     | 25                 | 24.07             | 1750                   | 1.5            |                                                                                     |                                                                                     |
|                         | 139                       | 69                     | 20                 | 20.21             | 1650                   | 1.4            |                                                                                     |                                                                                     |
|                         | 188                       | 52                     | 15                 | 14.92             | 1490                   | 1.5            |                                                                                     |                                                                                     |
|                         | 225                       | 43                     | 12.5               | 12.47             | 1400                   | 2.9            |                                                                                     |                                                                                     |
|                         | 267                       | 36                     | 10                 | 10.47             | 1320                   | 2.7            |                                                                                     |                                                                                     |
|                         | 362                       | 26                     | 7.5                | 7.73              | 1200                   | 2.9            |                                                                                     |                                                                                     |
|                         | 69                        | 140                    | 20                 | 20.21             | 2080                   | 0.7            | WKM50B                                                                              | 90B5/B14-4                                                                          |
|                         | 94                        | 103                    | 15                 | 14.92             | 1880                   | 0.76           |                                                                                     |                                                                                     |
|                         | 112                       | 86                     | 12.5               | 12.47             | 1770                   | 1.5            |                                                                                     |                                                                                     |
|                         | 134                       | 72                     | 10                 | 10.47             | 1670                   | 1.4            |                                                                                     |                                                                                     |
|                         | 181                       | 53                     | 7.5                | 7.73              | 1510                   | 1.5            |                                                                                     |                                                                                     |
|                         | 72                        | 134                    | 12.5               | 12.47             | 2050                   | 1.0            | WKM50B                                                                              | 90B5/B14-6                                                                          |
|                         | 86                        | 112                    | 10                 | 10.47             | 1930                   | 0.9            |                                                                                     |                                                                                     |
|                         | 116                       | 83                     | 7.5                | 7.73              | 1750                   | 1.0            |                                                                                     |                                                                                     |
|                         | 57                        | 168                    | 50                 | 48.45             | 2530                   | 1.2            | WKM63B                                                                              | 80B5/B14-2                                                                          |
|                         | 71                        | 136                    | 40                 | 39.29             | 2350                   | 1.3            |                                                                                     |                                                                                     |
|                         | 92                        | 105                    | 30                 | 30.15             | 2160                   | 1.9            |                                                                                     |                                                                                     |
|                         | 115                       | 84                     | 25                 | 24.44             | 2010                   | 2.1            |                                                                                     |                                                                                     |
|                         | 138                       | 69                     | 20                 | 20.25             | 1890                   | 2.1            |                                                                                     |                                                                                     |
|                         | 191                       | 51                     | 15                 | 14.67             | 1690                   | 2.1            |                                                                                     |                                                                                     |
|                         | 221                       | 44                     | 12.5               | 12.67             | 1610                   | 4.0            |                                                                                     |                                                                                     |
|                         | 267                       | 36                     | 10                 | 10.50             | 1510                   | 4.0            |                                                                                     |                                                                                     |
|                         | 368                       | 26                     | 7.5                | 7.60              | 1360                   | 4.1            |                                                                                     |                                                                                     |
|                         | 46                        | 209                    | 30                 | 30.15             | 2720                   | 1.0            | WKM63B                                                                              | 90B5/B14-4                                                                          |
|                         | 57                        | 169                    | 25                 | 24.44             | 2530                   | 1.1            |                                                                                     |                                                                                     |
|                         | 69                        | 140                    | 20                 | 20.25             | 2380                   | 1.1            |                                                                                     |                                                                                     |
|                         | 95                        | 101                    | 15                 | 14.67             | 2130                   | 1.1            |                                                                                     |                                                                                     |
|                         | 110                       | 87                     | 12.5               | 12.67             | 2030                   | 2.1            |                                                                                     |                                                                                     |
|                         | 133                       | 72                     | 10                 | 10.50             | 1910                   | 2.1            |                                                                                     |                                                                                     |
|                         | 184                       | 52                     | 7.5                | 7.60              | 1710                   | 2.1            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.1                     | 71                        | 136                    | 12.5               | 12.67             | 2360                   | 1.3            | WKM63B                                                                              | 90B5/B14-6                                                                          |
|                         | 86                        | 113                    | 10                 | 10.50             | 2210                   | 1.3            |                                                                                     |                                                                                     |
|                         | 118                       | 82                     | 7.5                | 7.60              | 1990                   | 1.3            |                                                                                     |                                                                                     |
|                         | 28.2                      | 334.5                  | 100                | 100.81            | 4380                   | 0.58           | WKM75C                                                                              | 80B5/B14-2                                                                          |
|                         | 37                        | 254                    | 75                 | 79.46             | 4000                   | 1.15           |                                                                                     |                                                                                     |
|                         | 45                        | 211                    | 60                 | 62.43             | 3750                   | 1.4            |                                                                                     |                                                                                     |
|                         | 57                        | 166                    | 50                 | 49.18             | 3470                   | 1.4            |                                                                                     |                                                                                     |
|                         | 47                        | 205.5                  | 60                 | 59.04             | 3690                   | 1.7            | WKM75B                                                                              | 80B5/B14-2                                                                          |
|                         | 58                        | 166                    | 50                 | 48.18             | 3440                   | 2.1            |                                                                                     |                                                                                     |
|                         | 70                        | 139                    | 40                 | 40.13             | 3240                   | 2.1            |                                                                                     |                                                                                     |
|                         | 93                        | 105                    | 30                 | 29.66             | 2950                   | 3.3            |                                                                                     |                                                                                     |
|                         | 111                       | 87                     | 25                 | 24.20             | 2770                   | 3.3            |                                                                                     |                                                                                     |
|                         | 29.1                      | 333                    | 50                 | 48.18             | 4340                   | 1.1            | WKM75B                                                                              | 90B5/B14-4                                                                          |
|                         | 35                        | 277                    | 40                 | 40.13             | 4080                   | 1.1            |                                                                                     |                                                                                     |
|                         | 46                        | 209                    | 30                 | 29.66             | 3720                   | 1.7            |                                                                                     |                                                                                     |
|                         | 56                        | 174                    | 25                 | 24.20             | 3500                   | 1.7            |                                                                                     |                                                                                     |
|                         | 71                        | 137                    | 20                 | 20.16             | 3230                   | 1.8            |                                                                                     |                                                                                     |
|                         | 93                        | 104                    | 15                 | 15.88             | 2950                   | 1.9            |                                                                                     |                                                                                     |
|                         | 112                       | 86                     | 12.5               | 12.49             | 2770                   | 3.5            |                                                                                     |                                                                                     |
|                         | 29.8                      | 325                    | 30                 | 29.66             | 4310                   | 1.1            | WKM75B                                                                              | 90B5/B14-6                                                                          |
|                         | 36                        | 271                    | 25                 | 24.20             | 4050                   | 1.1            |                                                                                     |                                                                                     |
|                         | 45                        | 213                    | 20                 | 20.16             | 3740                   | 1.1            |                                                                                     |                                                                                     |
|                         | 60                        | 162                    | 15                 | 15.88             | 3410                   | 1.2            |                                                                                     |                                                                                     |
|                         | 72                        | 134                    | 12.5               | 12.49             | 3210                   | 2.2            |                                                                                     |                                                                                     |
|                         | 91                        | 106                    | 10                 | 9.84              | 2960                   | 2.3            |                                                                                     |                                                                                     |
|                         | 120                       | 80                     | 7.5                | 7.48              | 2700                   | 2.5            |                                                                                     |                                                                                     |
|                         | 18.5                      | 511                    | 150                | 151.20            | 6390                   | 1.0            | WKM90C                                                                              | 80B5/B14-2                                                                          |
|                         | 22.2                      | 425                    | 125                | 125.95            | 6010                   | 1.1            |                                                                                     |                                                                                     |
|                         | 28.2                      | 335                    | 100                | 99.22             | 5550                   | 1.1            |                                                                                     |                                                                                     |
|                         | 37                        | 255                    | 75                 | 75.45             | 5070                   | 1.2            |                                                                                     |                                                                                     |
|                         | 45                        | 211                    | 60                 | 62.43             | 4760                   | 2.3            |                                                                                     |                                                                                     |
|                         | 57                        | 166                    | 50                 | 49.18             | 4390                   | 2.3            |                                                                                     |                                                                                     |
|                         | 47                        | 203.5                  | 60                 | 59.04             | 4670                   | 2.4            | WKM90B                                                                              | 80B5/B14-2                                                                          |
|                         | 58                        | 166                    | 50                 | 48.18             | 4360                   | 2.9            |                                                                                     |                                                                                     |
|                         | 70                        | 162                    | 40                 | 40.13             | 4110                   | 3.3            |                                                                                     |                                                                                     |
|                         | 22.4                      | 422                    | 60                 | 62.43             | 6000                   | 1.1            | WKM90C                                                                              | 90B5/B14-4                                                                          |
|                         | 28.5                      | 332                    | 50                 | 49.18             | 5540                   | 1.1            |                                                                                     |                                                                                     |
|                         | 23.7                      | 408                    | 60                 | 59.04             | 5890                   | 1.2            | WKM90B                                                                              | 90B5/B14-4                                                                          |
|                         | 29.1                      | 333                    | 50                 | 48.18             | 5500                   | 1.5            |                                                                                     |                                                                                     |
|                         | 35                        | 277                    | 40                 | 40.13             | 5170                   | 1.7            |                                                                                     |                                                                                     |
|                         | 46                        | 209                    | 30                 | 30.24             | 4710                   | 2.4            |                                                                                     |                                                                                     |
|                         | 56                        | 174                    | 25                 | 25.19             | 4430                   | 2.8            |                                                                                     |                                                                                     |
|                         | 71                        | 137                    | 20                 | 19.84             | 4090                   | 2.8            |                                                                                     |                                                                                     |
|                         | 18.7                      | 517                    | 50                 | 48.18             | 6370                   | 1.0            | WKM90B                                                                              | 90B5/B14-6                                                                          |
|                         | 22.4                      | 431                    | 40                 | 40.13             | 6000                   | 1.1            |                                                                                     |                                                                                     |
|                         | 29.8                      | 325                    | 30                 | 30.24             | 5460                   | 1.5            |                                                                                     |                                                                                     |
|                         | 36                        | 271                    | 25                 | 25.19             | 5130                   | 1.8            |                                                                                     |                                                                                     |
|                         | 45                        | 213                    | 20                 | 19.84             | 4740                   | 1.8            |                                                                                     |                                                                                     |
|                         | 60                        | 162                    | 15                 | 15.09             | 4330                   | 1.9            |                                                                                     |                                                                                     |
|                         | 72                        | 134                    | 12.5               | 12.49             | 4060                   | 3.6            |                                                                                     |                                                                                     |
|                         | 91                        | 106                    | 10                 | 9.84              | 3750                   | 3.6            |                                                                                     |                                                                                     |
|                         | 120                       | 80                     | 7.5                | 7.48              | 3420                   | 3.7            |                                                                                     |                                                                                     |
| 1.5                     | 116                       | 113.5                  | 25                 | 24.07             | 1750                   | 1.1            | WKM50B                                                                              | 90B5/B14-2                                                                          |
|                         | 139                       | 95                     | 20                 | 20.21             | 1650                   | 1.03           |                                                                                     |                                                                                     |
|                         | 188                       | 70                     | 15                 | 14.92             | 1490                   | 1.1            |                                                                                     |                                                                                     |
|                         | 225                       | 59                     | 12.5               | 12.47             | 1400                   | 2.2            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.5                     | 267                       | 49                     | 10                 | 10.47             | 1320                   | 2.0            | WKM50B                                                                              | 90B5/B14-2                                                                          |
|                         | 362                       | 36                     | 7.5                | 7.73              | 1200                   | 2.2            |                                                                                     |                                                                                     |
|                         | 94                        | 141                    | 15                 | 14.92             | 1880                   | 0.6            | WKM50B                                                                              | 90B5/B14-4                                                                          |
|                         | 112                       | 117                    | 12.5               | 12.47             | 1770                   | 1.1            |                                                                                     |                                                                                     |
|                         | 134                       | 99                     | 10                 | 10.47             | 1670                   | 1.0            |                                                                                     |                                                                                     |
|                         | 181                       | 73                     | 7.5                | 7.73              | 1510                   | 1.1            |                                                                                     |                                                                                     |
|                         | 57                        | 229                    | 50                 | 48.45             | 2530                   | 0.9            | WKM63B                                                                              | 90B5/B14-2                                                                          |
|                         | 71                        | 185                    | 40                 | 39.29             | 2350                   | 0.95           |                                                                                     |                                                                                     |
|                         | 92                        | 143                    | 30                 | 30.15             | 2160                   | 1.4            |                                                                                     |                                                                                     |
|                         | 115                       | 115                    | 25                 | 24.44             | 2010                   | 1.5            |                                                                                     |                                                                                     |
|                         | 138                       | 95                     | 20                 | 20.25             | 1890                   | 1.5            |                                                                                     |                                                                                     |
|                         | 191                       | 69                     | 15                 | 14.67             | 1690                   | 1.5            |                                                                                     |                                                                                     |
|                         | 221                       | 60                     | 12.5               | 12.67             | 1610                   | 3.0            |                                                                                     |                                                                                     |
|                         | 267                       | 49                     | 10                 | 10.50             | 1510                   | 3.0            |                                                                                     |                                                                                     |
|                         | 368                       | 36                     | 7.5                | 7.60              | 1360                   | 3.0            |                                                                                     |                                                                                     |
|                         | 57                        | 230                    | 25                 | 24.44             | 2530                   | 0.8            | WKM63B                                                                              | 90B5/B14-4                                                                          |
|                         | 69                        | 191                    | 20                 | 20.25             | 2380                   | 0.8            |                                                                                     |                                                                                     |
|                         | 95                        | 138                    | 15                 | 14.67             | 2130                   | 0.8            |                                                                                     |                                                                                     |
|                         | 110                       | 119                    | 12.5               | 12.67             | 2030                   | 1.5            |                                                                                     |                                                                                     |
|                         | 133                       | 99                     | 10                 | 10.50             | 1910                   | 1.5            |                                                                                     |                                                                                     |
|                         | 184                       | 72                     | 7.5                | 7.60              | 1710                   | 1.5            | WKM75C                                                                              | 90B5/B14-2                                                                          |
|                         | 37                        | 347                    | 75                 | 79.46             | 4000                   | 0.6            |                                                                                     |                                                                                     |
|                         | 45                        | 287                    | 60                 | 62.43             | 3750                   | 1.0            |                                                                                     |                                                                                     |
|                         | 57                        | 226                    | 50                 | 49.18             | 3470                   | 1.1            | WKM75B                                                                              | 90B5/B14-2                                                                          |
|                         | 47                        | 280                    | 60                 | 59.04             | 3690                   | 1.2            |                                                                                     |                                                                                     |
|                         | 58                        | 227                    | 50                 | 48.18             | 3440                   | 1.5            |                                                                                     |                                                                                     |
|                         | 70                        | 189                    | 40                 | 40.13             | 3240                   | 1.5            |                                                                                     |                                                                                     |
|                         | 93                        | 142                    | 30                 | 29.66             | 2950                   | 2.4            |                                                                                     |                                                                                     |
|                         | 111                       | 118                    | 25                 | 24.20             | 2770                   | 2.5            |                                                                                     |                                                                                     |
|                         | 141                       | 93                     | 20                 | 20.16             | 2560                   | 2.5            |                                                                                     |                                                                                     |
|                         | 35                        | 378                    | 40                 | 40.13             | 4080                   | 0.8            | WKM75B                                                                              | 90B5/B14-4                                                                          |
|                         | 46                        | 285                    | 30                 | 29.66             | 3720                   | 1.2            |                                                                                     |                                                                                     |
|                         | 56                        | 237                    | 25                 | 24.20             | 3500                   | 1.3            |                                                                                     |                                                                                     |
|                         | 71                        | 187                    | 20                 | 20.16             | 3230                   | 1.3            |                                                                                     |                                                                                     |
|                         | 93                        | 142                    | 15                 | 15.88             | 2950                   | 1.4            |                                                                                     |                                                                                     |
|                         | 112                       | 118                    | 12.5               | 12.49             | 2770                   | 2.6            |                                                                                     |                                                                                     |
|                         | 142                       | 93                     | 10                 | 9.84              | 2550                   | 2.6            |                                                                                     |                                                                                     |
|                         | 187                       | 70                     | 7.5                | 7.48              | 2330                   | 2.8            |                                                                                     |                                                                                     |
|                         | 45                        | 291                    | 20                 | 20.16             | 3740                   | 0.83           | WKM75B                                                                              | 100B5/B14-6                                                                         |
|                         | 60                        | 221                    | 15                 | 15.88             | 3410                   | 0.91           |                                                                                     |                                                                                     |
|                         | 72                        | 183                    | 12.5               | 12.49             | 3210                   | 1.6            |                                                                                     |                                                                                     |
|                         | 91                        | 144                    | 10                 | 9.84              | 2960                   | 1.7            |                                                                                     |                                                                                     |
|                         | 120                       | 110                    | 7.5                | 7.48              | 2700                   | 1.8            |                                                                                     |                                                                                     |
|                         | 28.2                      | 457                    | 100                | 99.22             | 5550                   | 0.83           | WKM90C                                                                              | 90B5/B14-2                                                                          |
|                         | 37                        | 347                    | 75                 | 75.45             | 5070                   | 0.86           |                                                                                     |                                                                                     |
|                         | 45                        | 287                    | 60                 | 62.43             | 4760                   | 1.7            |                                                                                     |                                                                                     |
|                         | 57                        | 226                    | 50                 | 49.18             | 4390                   | 1.7            |                                                                                     |                                                                                     |
|                         | 47                        | 278                    | 60                 | 59.04             | 4670                   | 1.8            | WKM90B                                                                              | 90B5/B14-2                                                                          |
|                         | 58                        | 227                    | 50                 | 48.18             | 4360                   | 2.2            |                                                                                     |                                                                                     |
|                         | 70                        | 189                    | 40                 | 40.13             | 4110                   | 2.5            |                                                                                     |                                                                                     |
|                         | 93                        | 142                    | 30                 | 30.24             | 3740                   | 3.4            |                                                                                     |                                                                                     |
|                         | 111                       | 118                    | 25                 | 25.19             | 3520                   | 4.0            |                                                                                     |                                                                                     |
|                         | 29.1                      | 454                    | 50                 | 48.18             | 5500                   | 1.1            | WKM90B                                                                              | 90B5/B14-4                                                                          |
|                         | 35                        | 378                    | 40                 | 40.13             | 5170                   | 1.3            |                                                                                     |                                                                                     |
|                         | 46                        | 285                    | 30                 | 30.24             | 4710                   | 1.8            |                                                                                     |                                                                                     |
|                         | 56                        | 237                    | 25                 | 25.19             | 4430                   | 2.0            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.5                     | 71                        | 187                    | 20                 | 19.84             | 4090                   | 2.0            | WKM90B                                                                              | 90B5/B14-4                                                                          |
|                         | 93                        | 142                    | 15                 | 15.09             | 3730                   | 2.1            |                                                                                     |                                                                                     |
|                         | 112                       | 118                    | 12.5               | 12.49             | 3510                   | 4.1            |                                                                                     |                                                                                     |
|                         | 142                       | 93                     | 10                 | 9.84              | 3240                   | 4.1            |                                                                                     |                                                                                     |
|                         | 187                       | 70                     | 7.5                | 7.48              | 2950                   | 4.3            |                                                                                     |                                                                                     |
|                         | 30                        | 443                    | 30                 | 30.24             | 5460                   | 1.1            | WKM90B                                                                              | 100B5/B14-6                                                                         |
|                         | 36                        | 369                    | 25                 | 25.19             | 5130                   | 1.3            |                                                                                     |                                                                                     |
|                         | 45                        | 291                    | 20                 | 19.84             | 4740                   | 1.3            |                                                                                     |                                                                                     |
|                         | 60                        | 221                    | 15                 | 15.09             | 4330                   | 1.4            |                                                                                     |                                                                                     |
|                         | 72                        | 183                    | 12.5               | 12.49             | 4060                   | 2.6            |                                                                                     |                                                                                     |
|                         | 91                        | 144                    | 10                 | 9.84              | 3750                   | 2.6            |                                                                                     |                                                                                     |
|                         | 120                       | 110                    | 7.5                | 7.48              | 3420                   | 2.7            |                                                                                     |                                                                                     |
| 2.2                     | 139                       | 140                    | 20                 | 20.21             | 1650                   | 0.7            | WKM50B                                                                              | 90B5/B14-2                                                                          |
|                         | 188                       | 103                    | 15                 | 14.92             | 1490                   | 0.76           |                                                                                     |                                                                                     |
|                         | 225                       | 86                     | 12.5               | 12.47             | 1400                   | 1.5            |                                                                                     |                                                                                     |
|                         | 267                       | 72                     | 10                 | 10.47             | 1320                   | 1.35           |                                                                                     |                                                                                     |
|                         | 362                       | 54                     | 7.5                | 7.73              | 1200                   | 1.5            |                                                                                     |                                                                                     |
|                         | 92                        | 209                    | 30                 | 30.15             | 2160                   | 0.9            | WKM63B                                                                              | 90B5/B14-2                                                                          |
|                         | 115                       | 168                    | 25                 | 24.44             | 2010                   | 1.0            |                                                                                     |                                                                                     |
|                         | 138                       | 140                    | 20                 | 20.25             | 1890                   | 1.0            |                                                                                     |                                                                                     |
|                         | 191                       | 101                    | 15                 | 14.67             | 1690                   | 1.0            |                                                                                     |                                                                                     |
|                         | 221                       | 87                     | 12.5               | 12.67             | 1610                   | 2.0            |                                                                                     |                                                                                     |
|                         | 267                       | 72                     | 10                 | 10.50             | 1510                   | 2.0            |                                                                                     |                                                                                     |
|                         | 368                       | 53                     | 7.5                | 7.60              | 1360                   | 2.0            |                                                                                     |                                                                                     |
|                         | 58                        | 333                    | 50                 | 48.18             | 3440                   | 1.0            | WKM75B                                                                              | 90B5/B14-2                                                                          |
|                         | 70                        | 277                    | 40                 | 40.13             | 3240                   | 1.0            |                                                                                     |                                                                                     |
|                         | 93                        | 208                    | 30                 | 29.66             | 2950                   | 1.6            |                                                                                     |                                                                                     |
|                         | 111                       | 174                    | 25                 | 24.20             | 2770                   | 1.7            |                                                                                     |                                                                                     |
|                         | 141                       | 137                    | 20                 | 20.16             | 2560                   | 1.7            |                                                                                     |                                                                                     |
|                         | 186                       | 104                    | 15                 | 15.88             | 2340                   | 1.9            |                                                                                     |                                                                                     |
|                         | 224                       | 86                     | 12.5               | 12.49             | 2190                   | 3.4            |                                                                                     |                                                                                     |
|                         | 56                        | 348                    | 25                 | 24.20             | 3500                   | 0.86           | WKM75B                                                                              | 100B5/B14-4                                                                         |
|                         | 71                        | 274                    | 20                 | 20.16             | 3230                   | 0.9            |                                                                                     |                                                                                     |
|                         | 93                        | 208                    | 15                 | 15.88             | 2950                   | 1.0            |                                                                                     |                                                                                     |
|                         | 112                       | 172                    | 12.5               | 12.49             | 2770                   | 1.7            |                                                                                     |                                                                                     |
|                         | 142                       | 136                    | 10                 | 9.84              | 2550                   | 1.8            |                                                                                     |                                                                                     |
|                         | 187                       | 103                    | 7.5                | 7.48              | 2330                   | 1.9            | WKM75B                                                                              | 112B5/B14-6                                                                         |
|                         | 60                        | 324                    | 15                 | 15.88             | 3410                   | 0.6            |                                                                                     |                                                                                     |
|                         | 72                        | 268                    | 12.5               | 12.49             | 3210                   | 1.1            |                                                                                     |                                                                                     |
|                         | 91                        | 211                    | 10                 | 9.84              | 2960                   | 1.1            |                                                                                     |                                                                                     |
|                         | 120                       | 161                    | 7.5                | 7.48              | 2700                   | 1.2            |                                                                                     |                                                                                     |
|                         | 37                        | 510                    | 75                 | 75.45             | 5070                   | 0.6            | WKM90C                                                                              | 90B5/B14-2                                                                          |
|                         | 45                        | 422                    | 60                 | 62.43             | 4760                   | 1.1            |                                                                                     |                                                                                     |
|                         | 57                        | 332                    | 50                 | 49.18             | 4390                   | 1.1            |                                                                                     |                                                                                     |
|                         | 47                        | 407                    | 60                 | 59.04             | 4670                   | 1.2            | WKM90B                                                                              | 90B5/B14-2                                                                          |
|                         | 58                        | 333                    | 50                 | 48.18             | 4360                   | 1.5            |                                                                                     |                                                                                     |
|                         | 70                        | 277                    | 40                 | 40.13             | 4110                   | 1.7            |                                                                                     |                                                                                     |
|                         | 93                        | 208                    | 30                 | 30.24             | 3740                   | 2.3            |                                                                                     |                                                                                     |
|                         | 111                       | 174                    | 25                 | 25.19             | 3520                   | 2.7            |                                                                                     |                                                                                     |
|                         | 141                       | 137                    | 20                 | 19.84             | 3250                   | 2.7            |                                                                                     |                                                                                     |
|                         | 35                        | 554                    | 40                 | 40.13             | 5170                   | 0.9            | WKM90B                                                                              | 100B5/B14-4                                                                         |
|                         | 46                        | 418                    | 30                 | 30.24             | 4710                   | 1.2            |                                                                                     |                                                                                     |
|                         | 56                        | 348                    | 25                 | 25.19             | 4430                   | 1.4            |                                                                                     |                                                                                     |
|                         | 71                        | 274                    | 20                 | 19.84             | 4090                   | 1.4            |                                                                                     |                                                                                     |
|                         | 93                        | 208                    | 15                 | 15.09             | 3730                   | 1.4            |                                                                                     |                                                                                     |
|                         | 112                       | 172                    | 12.5               | 12.49             | 3510                   | 2.8            |                                                                                     |                                                                                     |

| P <sub>1n</sub><br>[kW] | n <sub>2</sub><br>[r/min] | M <sub>2</sub><br>[Nm] | i<br>公称<br>Nominal | i<br>实际<br>Actual | F <sub>r2</sub><br>[N] | f <sub>B</sub> |  |  |
|-------------------------|---------------------------|------------------------|--------------------|-------------------|------------------------|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 2.2                     | 142                       | 136                    | 10                 | 9.84              | 3240                   | 2.8            | WKM90B                                                                              | 100B5/B14-4                                                                         |
|                         | 187                       | 103                    | 7.5                | 7.48              | 2950                   | 2.9            |                                                                                     |                                                                                     |
|                         | 36                        | 541                    | 25                 | 25.19             | 5130                   | 0.9            | WKM90B                                                                              | 112B5/B14-6                                                                         |
|                         | 45                        | 426                    | 20                 | 19.84             | 4740                   | 0.9            |                                                                                     |                                                                                     |
|                         | 60                        | 324                    | 15                 | 15.09             | 4330                   | 0.93           |                                                                                     |                                                                                     |
|                         | 72                        | 268                    | 12.5               | 12.49             | 4060                   | 1.8            |                                                                                     |                                                                                     |
|                         | 91                        | 211                    | 10                 | 9.84              | 3750                   | 1.8            |                                                                                     |                                                                                     |
|                         | 120                       | 161                    | 7.5                | 7.48              | 3420                   | 1.9            |                                                                                     |                                                                                     |
| 3                       | 70                        | 378                    | 40                 | 40.13             | 3240                   | 0.77           | WKM75B                                                                              | 112B5/B14-2                                                                         |
|                         | 93                        | 285                    | 30                 | 29.66             | 2950                   | 1.2            |                                                                                     |                                                                                     |
|                         | 111                       | 237                    | 25                 | 24.20             | 2770                   | 1.2            |                                                                                     |                                                                                     |
|                         | 141                       | 187                    | 20                 | 20.16             | 2560                   | 1.25           |                                                                                     |                                                                                     |
|                         | 186                       | 142                    | 15                 | 15.88             | 2340                   | 1.4            |                                                                                     |                                                                                     |
|                         | 224                       | 117                    | 12.5               | 12.49             | 2190                   | 2.5            |                                                                                     |                                                                                     |
|                         | 285                       | 93                     | 10                 | 9.84              | 2030                   | 2.5            |                                                                                     |                                                                                     |
|                         | 374                       | 70                     | 7.5                | 7.48              | 1850                   | 2.7            | WKM75B                                                                              | 100B5/B14-4                                                                         |
|                         | 9.3                       | 284                    | 15                 | 15.88             | 2950                   | 0.7            |                                                                                     |                                                                                     |
|                         | 112                       | 235                    | 12.5               | 12.49             | 2770                   | 1.3            |                                                                                     |                                                                                     |
|                         | 142                       | 185                    | 10                 | 9.84              | 2550                   | 1.3            |                                                                                     |                                                                                     |
|                         | 187                       | 141                    | 7.5                | 7.48              | 2330                   | 1.4            | WKM90B                                                                              | 100B5/B14-2                                                                         |
|                         | 47                        | 556                    | 60                 | 59.04             | 4670                   | 0.9            |                                                                                     |                                                                                     |
|                         | 58                        | 453                    | 50                 | 48.18             | 4360                   | 1.1            |                                                                                     |                                                                                     |
|                         | 70                        | 378                    | 40                 | 40.13             | 4110                   | 1.24           |                                                                                     |                                                                                     |
|                         | 93                        | 285                    | 30                 | 30.24             | 3740                   | 1.7            |                                                                                     |                                                                                     |
|                         | 111                       | 237                    | 25                 | 25.19             | 3520                   | 2.0            |                                                                                     |                                                                                     |
|                         | 141                       | 187                    | 20                 | 19.84             | 3250                   | 2.0            |                                                                                     |                                                                                     |
|                         | 186                       | 142                    | 15                 | 15.09             | 2960                   | 2.1            |                                                                                     |                                                                                     |
|                         | 224                       | 117                    | 12.5               | 12.49             | 2780                   | 4.0            |                                                                                     |                                                                                     |
|                         | 285                       | 93                     | 10                 | 9.84              | 2570                   | 4.0            |                                                                                     |                                                                                     |
|                         | 374                       | 70                     | 7.5                | 7.48              | 2340                   | 4.2            | WKM90B                                                                              | 100B5/B14-4                                                                         |
|                         | 56                        | 474                    | 25                 | 25.19             | 4430                   | 1.0            |                                                                                     |                                                                                     |
|                         | 71                        | 374                    | 20                 | 19.84             | 4090                   | 1.0            |                                                                                     |                                                                                     |
|                         | 93                        | 284                    | 15                 | 15.09             | 3730                   | 1.1            |                                                                                     |                                                                                     |
|                         | 112                       | 235                    | 12.5               | 12.49             | 3510                   | 2.0            |                                                                                     |                                                                                     |
|                         | 142                       | 185                    | 10                 | 9.84              | 3240                   | 2.1            |                                                                                     |                                                                                     |
| 4                       | 187                       | 141                    | 7.5                | 7.48              | 2950                   | 2.1            | WKM75B                                                                              | 112B5/B14-2                                                                         |
|                         | 111                       | 316                    | 25                 | 24.20             | 2770                   | 0.9            |                                                                                     |                                                                                     |
|                         | 141                       | 248.5                  | 20                 | 20.16             | 2560                   | 0.9            |                                                                                     |                                                                                     |
|                         | 186                       | 190                    | 15                 | 15.88             | 2340                   | 1.0            |                                                                                     |                                                                                     |
|                         | 224                       | 156.5                  | 12.5               | 12.49             | 2190                   | 1.8            |                                                                                     |                                                                                     |
|                         | 285                       | 123                    | 10                 | 9.84              | 2030                   | 1.9            | WKM75B                                                                              | 112B5/B14-4                                                                         |
|                         | 374                       | 94                     | 7.5                | 7.48              | 1850                   | 2.1            |                                                                                     |                                                                                     |
|                         | 112                       | 314                    | 12.5               | 12.49             | 2770                   | 1.0            |                                                                                     |                                                                                     |
|                         | 142                       | 247                    | 10                 | 9.84              | 2550                   | 1.0            | WKM90B                                                                              | 112B5/B14-2                                                                         |
|                         | 187                       | 188                    | 7.5                | 7.48              | 2330                   | 1.1            |                                                                                     |                                                                                     |
|                         | 70                        | 504                    | 40                 | 40.13             | 4110                   | 0.9            |                                                                                     |                                                                                     |
|                         | 93                        | 380                    | 30                 | 30.24             | 3740                   | 1.3            |                                                                                     |                                                                                     |
|                         | 111                       | 316                    | 25                 | 25.19             | 3520                   | 1.5            |                                                                                     |                                                                                     |
|                         | 141                       | 248.5                  | 20                 | 19.84             | 3250                   | 1.5            |                                                                                     |                                                                                     |
|                         | 186                       | 190                    | 15                 | 15.09             | 2960                   | 1.5            |                                                                                     |                                                                                     |
|                         | 224                       | 156.5                  | 12.5               | 12.49             | 2780                   | 3.0            |                                                                                     |                                                                                     |
|                         | 285                       | 123                    | 10                 | 9.84              | 2570                   | 3.0            |                                                                                     |                                                                                     |
|                         | 374                       | 94                     | 7.5                | 7.48              | 2340                   | 3.1            | WKM90B                                                                              | 112B5/B14-4                                                                         |
|                         | 71                        | 498                    | 20                 | 19.84             | 4090                   | 0.74           |                                                                                     |                                                                                     |
|                         | 93                        | 379                    | 15                 | 15.09             | 3730                   | 0.77           |                                                                                     |                                                                                     |
|                         | 112                       | 314                    | 12.5               | 12.49             | 3510                   | 1.5            |                                                                                     |                                                                                     |
|                         | 142                       | 247                    | 10                 | 9.84              | 3240                   | 1.5            |                                                                                     |                                                                                     |
|                         | 187                       | 188                    | 7.5                | 7.48              | 2950                   | 1.6            |                                                                                     |                                                                                     |

### 6.3 WKMS 性能参数 / Performance parameter

$n_1 = 1400 \text{ r/min}$

$f_B = 1$

| $M_{2 \max}$<br>[Nm] | $n_2$<br>[r/min] | i<br>公称<br>Nominal | i<br>实际<br>Actual | $P_{1 \max}$<br>[kW] | $F_{r2}$<br>[N] | $F_{r1}$<br>[N] |  |
|----------------------|------------------|--------------------|-------------------|----------------------|-----------------|-----------------|-------------------------------------------------------------------------------------|
| 130                  | 4.8              | 300                | 291.79            | 0.07                 | 4100            | 400             | WKMS50C                                                                             |
| 130                  | 5.7              | 250                | 244.29            | 0.09                 | 4100            | 400             |                                                                                     |
| 130                  | 7                | 200                | 200.44            | 0.11                 | 4100            | 400             |                                                                                     |
| 130                  | 10               | 150                | 146.67            | 0.14                 | 4000            | 400             |                                                                                     |
| 130                  | 12               | 125                | 120.34            | 0.18                 | 3770            | 400             |                                                                                     |
| 100                  | 14               | 100                | 101.04            | 0.16                 | 3560            | 400             |                                                                                     |
| 80                   | 19               | 75                 | 74.62             | 0.17                 | 3220            | 400             |                                                                                     |
| 130                  | 22               | 60                 | 62.36             | 0.34                 | 3030            | 400             |                                                                                     |
| 100                  | 27               | 50                 | 52.36             | 0.31                 | 2860            | 400             |                                                                                     |
| 130                  | 24               | 60                 | 58.36             | 0.35                 | 2960            | 400             | WKMS50B                                                                             |
| 130                  | 29               | 50                 | 48.86             | 0.42                 | 2790            | 400             |                                                                                     |
| 130                  | 35               | 40                 | 40.09             | 0.52                 | 2610            | 400             |                                                                                     |
| 130                  | 48               | 30                 | 29.33             | 0.71                 | 2350            | 400             |                                                                                     |
| 130                  | 58               | 25                 | 24.07             | 0.86                 | 2200            | 400             |                                                                                     |
| 100                  | 69               | 20                 | 20.21             | 0.79                 | 2080            | 400             |                                                                                     |
| 80                   | 94               | 15                 | 14.92             | 0.85                 | 1880            | 400             |                                                                                     |
| 130                  | 112              | 12.5               | 12.47             | 1.7                  | 1770            | 400             |                                                                                     |
| 100                  | 134              | 10                 | 10.47             | 1.5                  | 1670            | 400             |                                                                                     |
| 80                   | 181              | 7.5                | 7.73              | 1.6                  | 1510            | 400             |                                                                                     |
| 200                  | 4.6              | 300                | 304.46            | 0.11                 | 4800            | 400             | WKMS63C                                                                             |
| 200                  | 5.7              | 250                | 242.26            | 0.13                 | 4800            | 400             |                                                                                     |
| 180                  | 7.1              | 200                | 196.43            | 0.15                 | 4800            | 400             |                                                                                     |
| 200                  | 9.2              | 150                | 150.74            | 0.21                 | 4650            | 400             |                                                                                     |
| 180                  | 11               | 125                | 122.22            | 0.24                 | 4330            | 400             |                                                                                     |
| 150                  | 14               | 100                | 101.27            | 0.24                 | 4070            | 400             |                                                                                     |
| 110                  | 19               | 75                 | 73.33             | 0.24                 | 3650            | 400             |                                                                                     |
| 180                  | 22               | 60                 | 63.33             | 0.46                 | 3480            | 400             |                                                                                     |
| 150                  | 27               | 50                 | 52.48             | 0.47                 | 3270            | 400             |                                                                                     |
| 200                  | 23               | 60                 | 60.89             | 0.53                 | 3430            | 530             | WKMS63B                                                                             |
| 200                  | 29               | 50                 | 48.45             | 0.65                 | 3190            | 530             |                                                                                     |
| 180                  | 36               | 40                 | 39.29             | 0.73                 | 2970            | 530             |                                                                                     |
| 200                  | 46               | 30                 | 30.15             | 1.1                  | 2720            | 530             |                                                                                     |
| 180                  | 57               | 25                 | 24.44             | 1.2                  | 2530            | 530             |                                                                                     |
| 150                  | 69               | 20                 | 20.25             | 1.2                  | 2380            | 530             |                                                                                     |
| 110                  | 95               | 15                 | 14.67             | 1.2                  | 2130            | 530             |                                                                                     |
| 180                  | 110              | 12.5               | 12.67             | 2.3                  | 2030            | 530             |                                                                                     |
| 150                  | 133              | 10                 | 10.50             | 2.3                  | 1910            | 530             |                                                                                     |
| 110                  | 184              | 7.5                | 7.60              | 2.3                  | 1710            | 530             |                                                                                     |
| 350                  | 4.7              | 300                | 295.18            | 0.19                 | 6500            | 560             | WKMS75C                                                                             |
| 350                  | 5.8              | 250                | 240.89            | 0.24                 | 6500            | 560             |                                                                                     |
| 300                  | 7                | 200                | 200.66            | 0.24                 | 6500            | 560             |                                                                                     |
| 350                  | 9.3              | 150                | 149.29            | 0.38                 | 6500            | 560             |                                                                                     |
| 300                  | 11               | 125                | 121.02            | 0.39                 | 5980            | 560             |                                                                                     |
| 240                  | 14               | 100                | 100.81            | 0.39                 | 5520            | 560             |                                                                                     |
| 200                  | 19               | 75                 | 79.41             | 0.43                 | 5040            | 560             |                                                                                     |
| 300                  | 22               | 60                 | 62.43             | 0.78                 | 4730            | 560             |                                                                                     |
| 240                  | 28               | 50                 | 49.18             | 0.79                 | 4370            | 560             |                                                                                     |
| 350                  | 24               | 60                 | 59.04             | 0.94                 | 4660            | 860             | WKMS75B                                                                             |
| 350                  | 29               | 50                 | 48.18             | 1.2                  | 4340            | 860             |                                                                                     |
| 300                  | 35               | 40                 | 40.13             | 1.2                  | 4080            | 860             |                                                                                     |
| 350                  | 46               | 30                 | 29.66             | 1.8                  | 3720            | 860             |                                                                                     |
| 300                  | 56               | 25                 | 24.20             | 1.9                  | 3500            | 860             |                                                                                     |

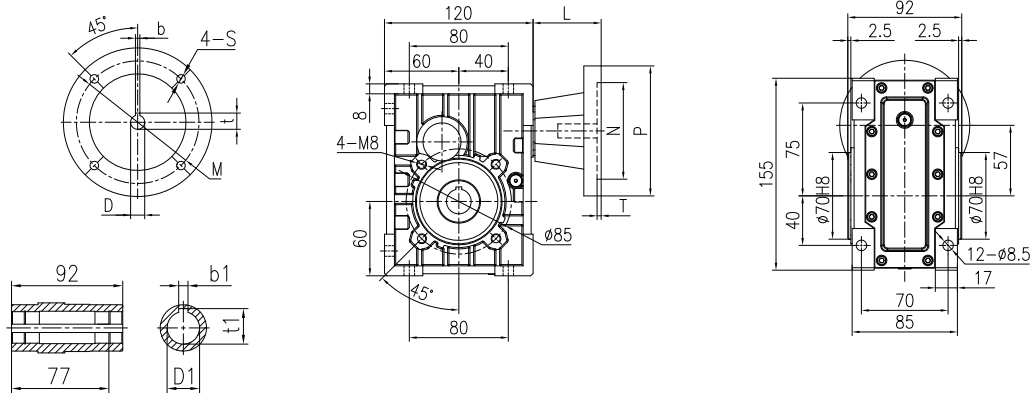
**$n_1 = 1400 \text{ r/min}$** 

| $M_{2\max}$<br>[Nm] | $n_2$<br>[r/min] | i<br>公称<br>Nominal | i<br>实际<br>Actual | $P_{1\max}$<br>[kW] | $F_{r2}$<br>[N] | $F_{r1}$<br>[N] |  |
|---------------------|------------------|--------------------|-------------------|---------------------|-----------------|-----------------|-------------------------------------------------------------------------------------|
| 240                 | 71               | 20                 | 20.16             | 1.9                 | 3230            | 860             | WKMS75B                                                                             |
| 200                 | 93               | 15                 | 15.88             | 2.1                 | 2950            | 860             |                                                                                     |
| 300                 | 112              | 12.5               | 12.49             | 3.8                 | 2770            | 860             |                                                                                     |
| 240                 | 142              | 10                 | 9.84              | 3.9                 | 2550            | 860             |                                                                                     |
| 200                 | 187              | 7.5                | 7.48              | 4.3                 | 2330            | 860             |                                                                                     |
| 500                 | 4.7              | 300                | 295.18            | 0.27                | 8300            | 560             | WKMS90C                                                                             |
| 500                 | 5.8              | 250                | 240.89            | 0.34                | 8300            | 560             |                                                                                     |
| 480                 | 7                | 200                | 200.66            | 0.39                | 8300            | 560             |                                                                                     |
| 500                 | 9.3              | 150                | 151.20            | 0.54                | 8050            | 560             |                                                                                     |
| 480                 | 11               | 125                | 125.95            | 0.62                | 7580            | 560             |                                                                                     |
| 380                 | 14               | 100                | 99.22             | 0.62                | 7000            | 560             |                                                                                     |
| 300                 | 19               | 75                 | 75.45             | 0.65                | 6390            | 560             |                                                                                     |
| 480                 | 22               | 60                 | 62.43             | 1.3                 | 6000            | 560             |                                                                                     |
| 380                 | 28               | 50                 | 49.18             | 1.3                 | 5540            | 560             |                                                                                     |
| 500                 | 24               | 60                 | 59.04             | 1.3                 | 5890            | 1260            | WKMS90B                                                                             |
| 500                 | 29               | 50                 | 48.18             | 1.7                 | 5500            | 1260            |                                                                                     |
| 480                 | 35               | 40                 | 40.13             | 1.9                 | 5170            | 1260            |                                                                                     |
| 500                 | 46               | 30                 | 30.24             | 2.6                 | 4710            | 1260            |                                                                                     |
| 480                 | 56               | 25                 | 25.19             | 3.0                 | 4430            | 1260            |                                                                                     |
| 380                 | 71               | 20                 | 19.84             | 3.1                 | 4090            | 1260            |                                                                                     |
| 300                 | 93               | 15                 | 15.09             | 3.2                 | 3730            | 1260            |                                                                                     |
| 480                 | 112              | 12.5               | 12.49             | 6.1                 | 3510            | 1260            |                                                                                     |
| 380                 | 142              | 10                 | 9.84              | 6.2                 | 3240            | 1260            |                                                                                     |
| 300                 | 187              | 7.5                | 7.48              | 6.4                 | 2950            | 1260            |                                                                                     |

## 7.外形尺寸图集 / OUTLINE DIMENSION SHEET

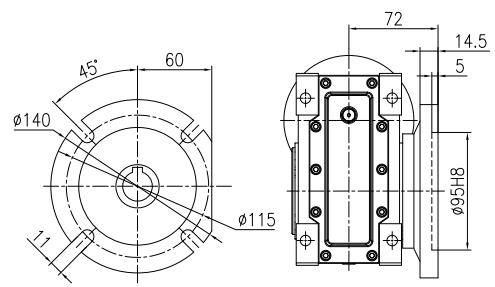
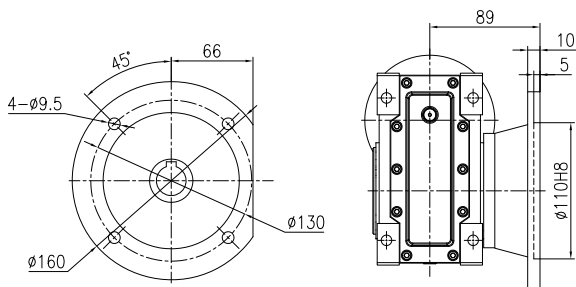
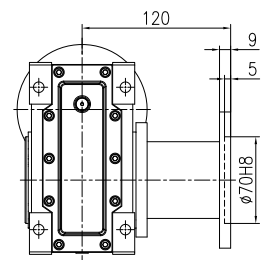
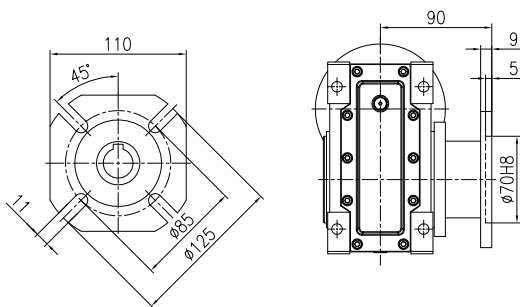
### 7.1 WKM.. 外形尺寸 / Outline Dimension

#### WKM 50B..



FA

FB



FC

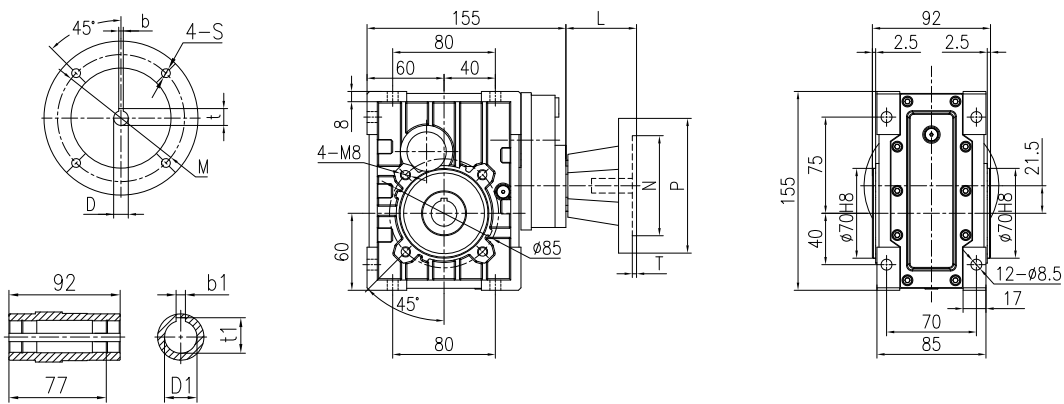
FD

| IEC   | DE8 | b | t    | P   | M   | N   | S  | T   | L  | D <sub>1H7</sub>                   | b <sub>1</sub> | t <sub>1</sub> |
|-------|-----|---|------|-----|-----|-----|----|-----|----|------------------------------------|----------------|----------------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9  | 3.5 | 45 | 20*                                | 6*             | 22.8*          |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9  | 4   | 52 | 24                                 | 8              | 27.3           |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7  | 3   | 52 | 25*                                | 8*             | 28.1*          |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11 | 4   | 62 | * 非标产品，订单时请说明<br>* Only on request |                |                |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 7  | 3.5 | 62 |                                    |                |                |
| 90B5  | 24  | 8 | 27.3 | 200 | 165 | 130 | 11 | 4   | 72 |                                    |                |                |
| 90B14 | 24  | 8 | 27.3 | 140 | 115 | 95  | 9  | 3.5 | 72 |                                    |                |                |

重量（不包括马达）  
≈4.1kg

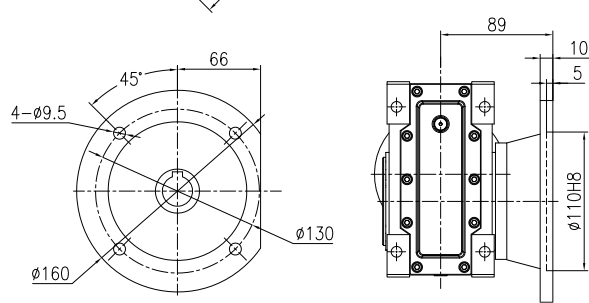
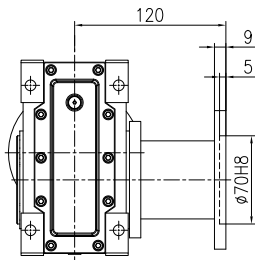
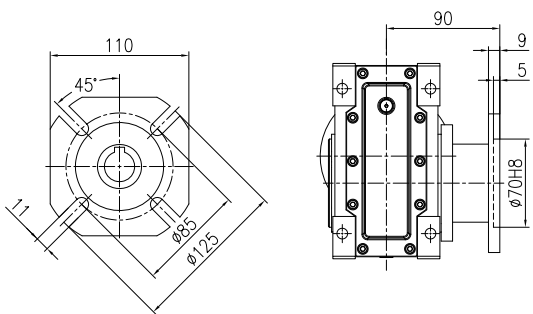
Weight without motor  
≈4.1kg

WKM 50C..

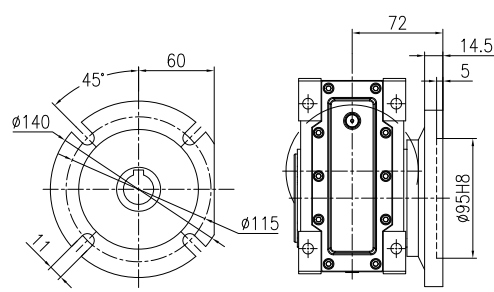


FA

FB



FC



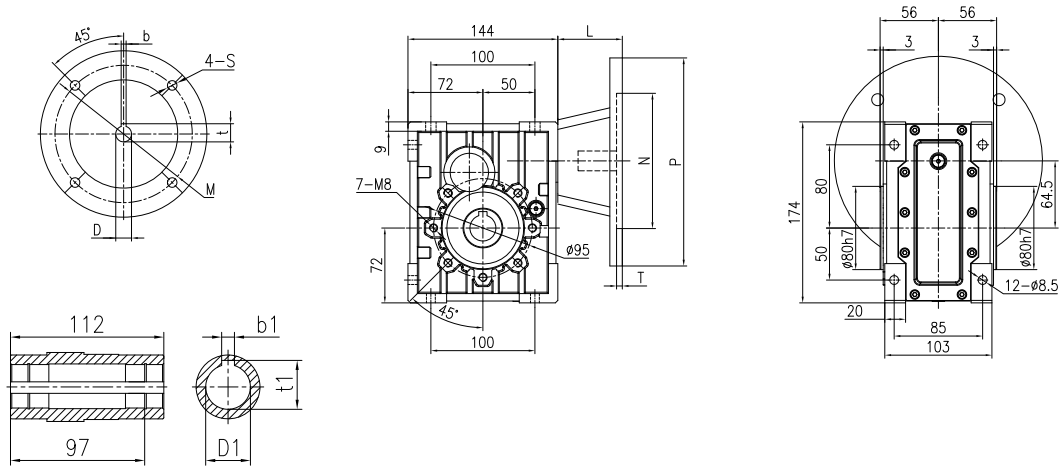
FD

| IEC   | DE8 | b | t    | P   | M   | N   | S | T   | L  | D1H7              | b1 | t1    |
|-------|-----|---|------|-----|-----|-----|---|-----|----|-------------------|----|-------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9 | 3.5 | 45 | 20*               | 6* | 22.8* |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9 | 4   | 52 | 24                | 8  | 27.3  |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7 | 3   | 52 | 25*               | 8* | 28.1* |
|       |     |   |      |     |     |     |   |     |    | * 非标产品，订单时请说明     |    |       |
|       |     |   |      |     |     |     |   |     |    | * Only on request |    |       |
|       |     |   |      |     |     |     |   |     |    |                   |    |       |

重量（不包括马达）  
≈4.7kg

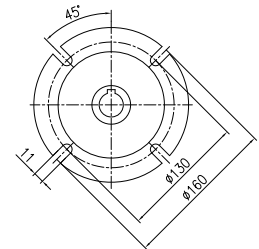
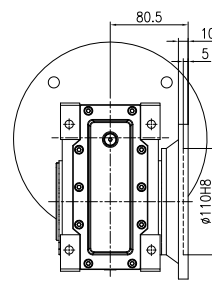
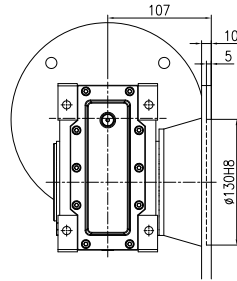
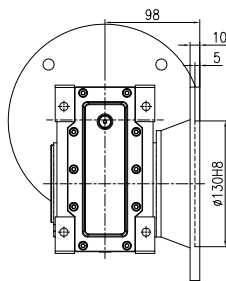
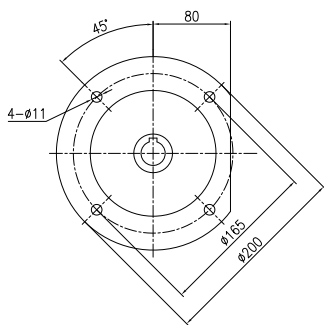
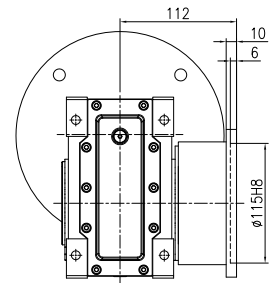
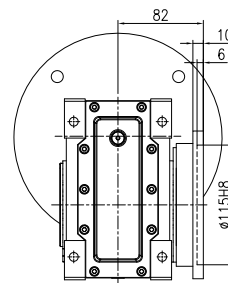
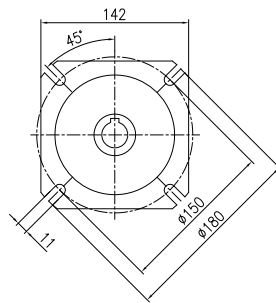
Weight without motor  
≈4.7kg

## WKM 63B..



FA

FB



FC

FD

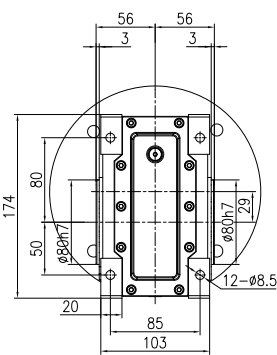
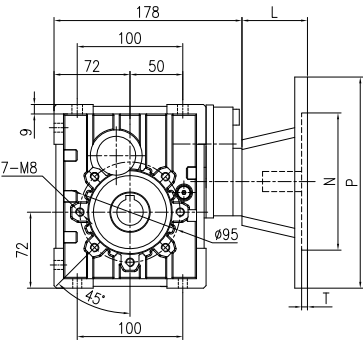
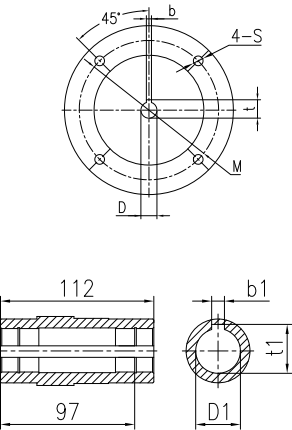
FE

| IEC   | DE8 | b | t    | P   | M   | N   | S  | T   | L  | D1H7                               | b1 | t1   |
|-------|-----|---|------|-----|-----|-----|----|-----|----|------------------------------------|----|------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9  | 3.5 | 45 | 25                                 | 8  | 28.3 |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9  | 4   | 52 |                                    |    |      |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7  | 3   | 52 |                                    |    |      |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11 | 4   | 62 | * 非标产品，订单时请说明<br>* Only on request |    |      |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 7  | 3.5 | 62 |                                    |    |      |
| 90B5  | 24  | 8 | 27.3 | 200 | 165 | 130 | 11 | 4   | 72 |                                    |    |      |
| 90B14 | 24  | 8 | 27.3 | 140 | 115 | 95  | 9  | 3.5 | 72 |                                    |    |      |

重量（不包括马达）  
≈6.1kg

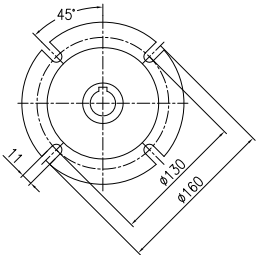
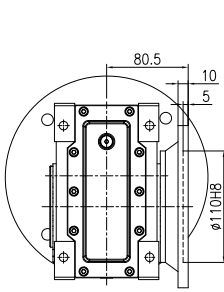
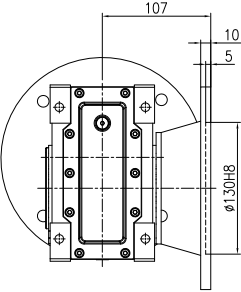
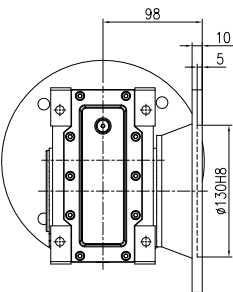
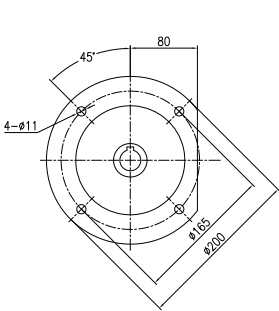
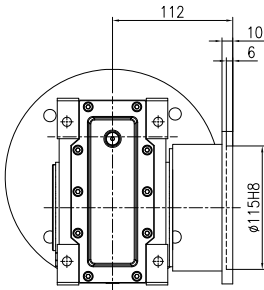
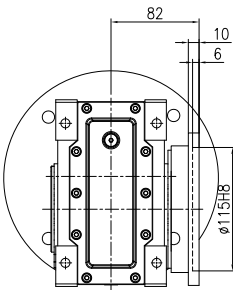
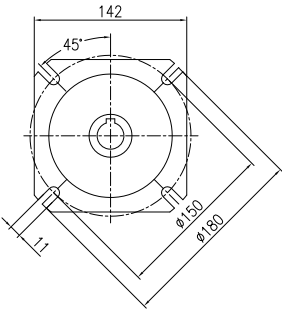
Weight without motor  
≈6.1kg

WKM 63C..



FA

FB



FC

FD

FE

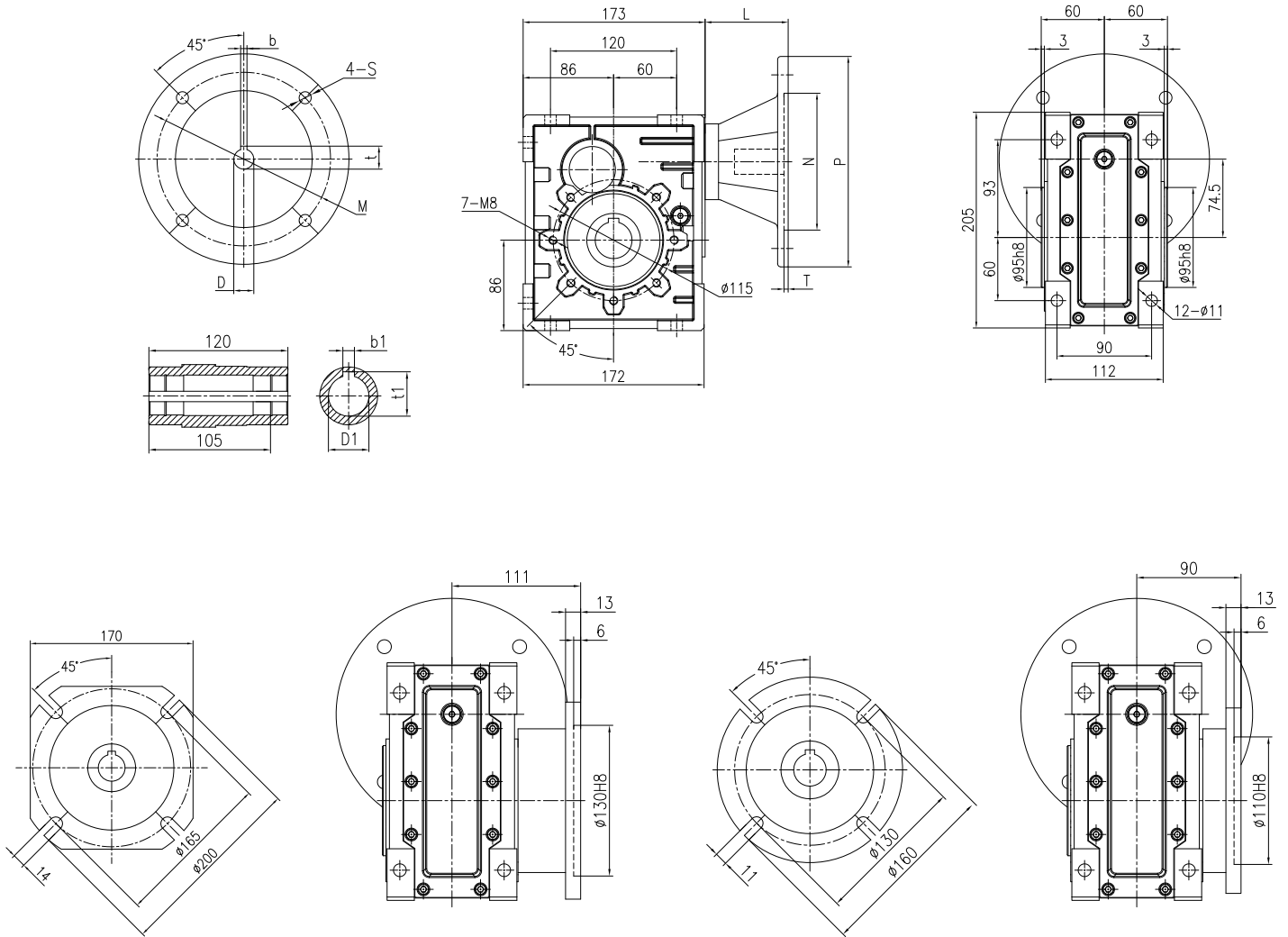
| IEC   | DE8 | b | t    | P   | M   | N   | S  | T   | L  | D1H7 | b1 | t1   |
|-------|-----|---|------|-----|-----|-----|----|-----|----|------|----|------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9  | 3.5 | 45 | 25   | 8  | 28.3 |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9  | 4   | 52 |      |    |      |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7  | 3   | 52 |      |    |      |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11 | 4   | 62 |      |    |      |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 7  | 3.5 | 62 |      |    |      |
|       |     |   |      |     |     |     |    |     |    |      |    |      |
|       |     |   |      |     |     |     |    |     |    |      |    |      |

\* 非标产品，订单时请说明  
\* Only on request

重量（不包括马达）  
≈6.7kg

Weight without motor  
≈6.7kg

## WKM 75B..



FA

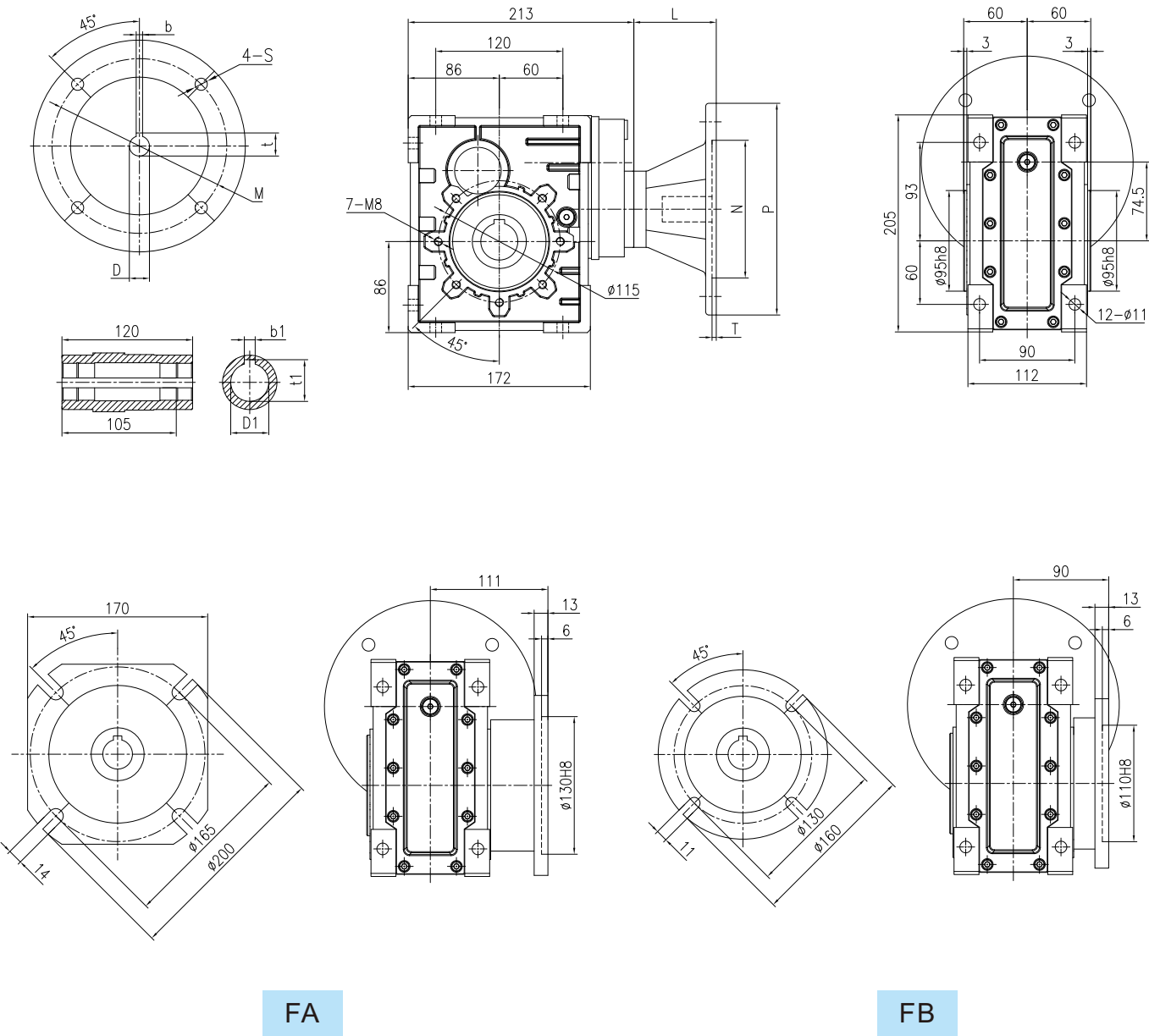
FB

| IEC        | DE8 | b | t    | P   | M   | N   | S    | T   | L  | D1 H8                              | b1  | t1    |
|------------|-----|---|------|-----|-----|-----|------|-----|----|------------------------------------|-----|-------|
| 63B5       | 11  | 4 | 12.8 | 140 | 115 | 95  | 9    | 3.5 | 53 | 28                                 | 8   | 31.3  |
| 71B5       | 14  | 5 | 16.3 | 160 | 130 | 110 | 9    | 4   | 60 | 30*                                | 8*  | 33.3* |
| 80B5       | 19  | 6 | 21.8 | 200 | 165 | 130 | 11   | 4   | 79 | 35*                                | 10* | 38.3* |
| 80B14      | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5  | 3.5 | 69 | * 非标产品，订单时请说明<br>* Only on request |     |       |
| 90B5       | 24  | 8 | 27.3 | 200 | 165 | 130 | 11   | 4   | 79 |                                    |     |       |
| 90B14      | 24  | 8 | 27.3 | 140 | 115 | 95  | 9    | 3.5 | 79 |                                    |     |       |
| 100/112B5  | 28  | 8 | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 89 |                                    |     |       |
| 100/112B14 | 28  | 8 | 31.3 | 160 | 130 | 110 | 9    | 4.5 | 89 |                                    |     |       |

重量（不包括马达）  
≈9.5kg

Weight without motor  
≈9.5kg

WKM 75C..

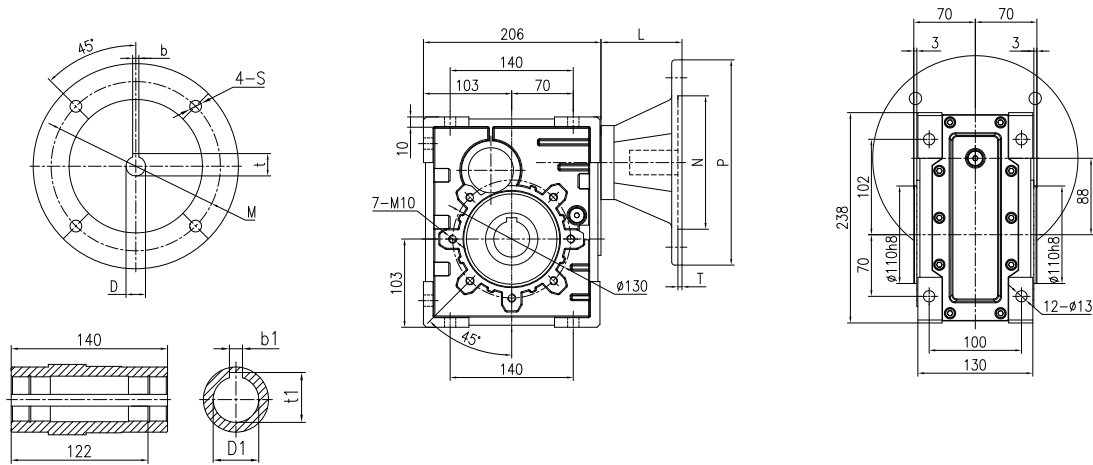


| IEC   | DE8 | b | t    | P   | M   | N   | S   | T   | L  | D1H8                               | b1  | t1    |
|-------|-----|---|------|-----|-----|-----|-----|-----|----|------------------------------------|-----|-------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9   | 3.5 | 53 | 28                                 | 8   | 31.3  |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9   | 4   | 60 | 30*                                | 8*  | 33.3* |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11  | 4   | 79 | 35*                                | 10* | 38.3* |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5 | 3.5 | 69 | * 非标产品，订单时请说明<br>* Only on request |     |       |
| 90B5  | 24  | 8 | 27.3 | 200 | 165 | 130 | 11  | 4   | 79 |                                    |     |       |
| 90B14 | 24  | 8 | 27.3 | 140 | 115 | 95  | 9   | 3.5 | 79 |                                    |     |       |
|       |     |   |      |     |     |     |     |     |    |                                    |     |       |

重量（不包括马达）  
≈10.9kg

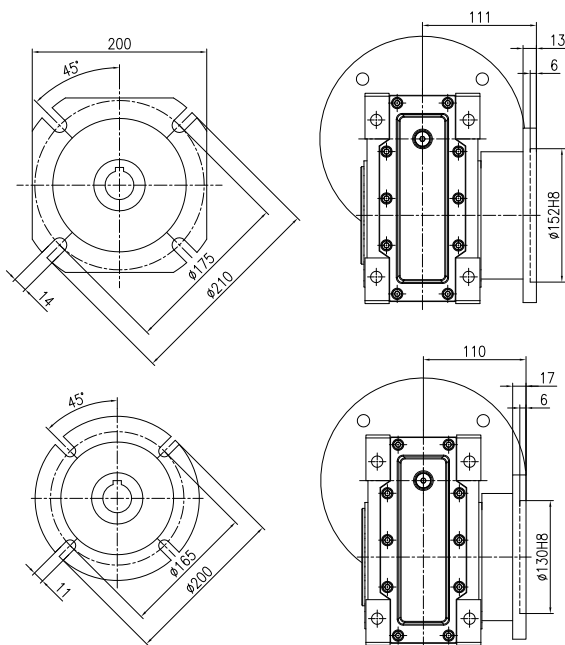
Weight without motor  
≈10.9kg

## WKM 90B..

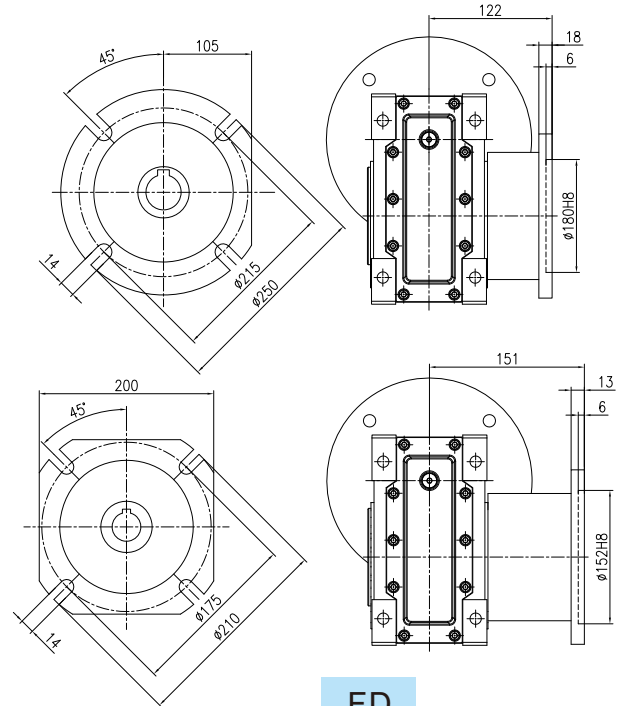


**FA**

**FB**



**FC**



**FD**

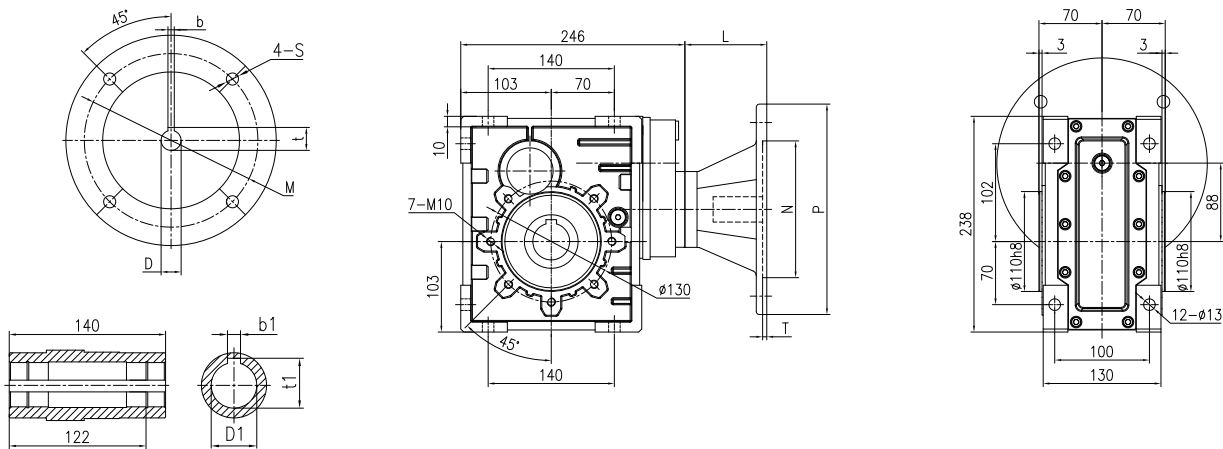
| IEC        | DE8 | b | t    | P   | M   | N   | S    | T   | L  | D1H8 | b1  | t1    |
|------------|-----|---|------|-----|-----|-----|------|-----|----|------|-----|-------|
| 63B5       | 11  | 4 | 12.8 | 140 | 115 | 95  | 9    | 3.5 | 53 | 35   | 10  | 38.3  |
| 71B5       | 14  | 5 | 16.3 | 160 | 130 | 110 | 9    | 4   | 60 | 38*  | 10* | 41.3* |
| 80B5       | 19  | 6 | 21.8 | 200 | 165 | 130 | 11   | 4   | 79 |      |     |       |
| 80B14      | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5  | 3.5 | 69 |      |     |       |
| 90B5       | 24  | 8 | 27.3 | 200 | 165 | 130 | 11   | 4   | 79 |      |     |       |
| 90B14      | 24  | 8 | 27.3 | 140 | 115 | 95  | 9    | 3.5 | 79 |      |     |       |
| 100/112B5  | 28  | 8 | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 89 |      |     |       |
| 100/112B14 | 28  | 8 | 31.3 | 160 | 130 | 110 | 9    | 4.5 | 89 |      |     |       |

\* 非标产品，订单时请说明  
\* Only on request

重量（不包括马达）  
≈13.4kg

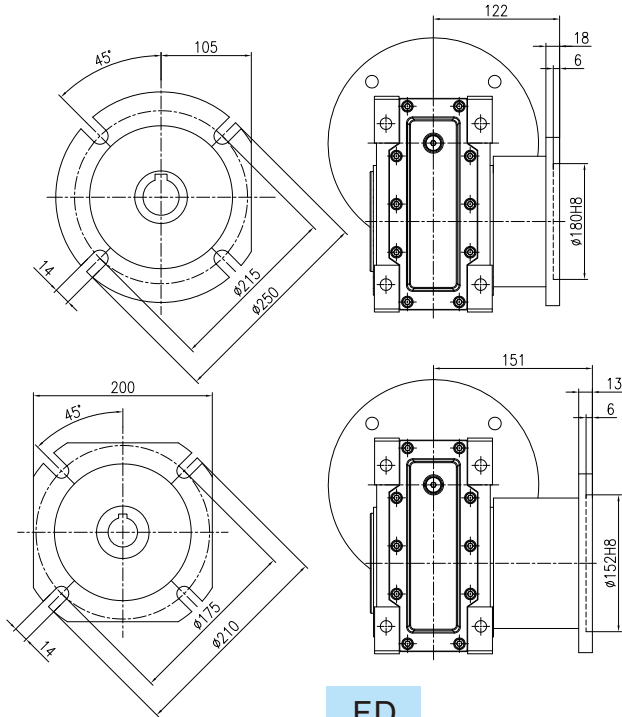
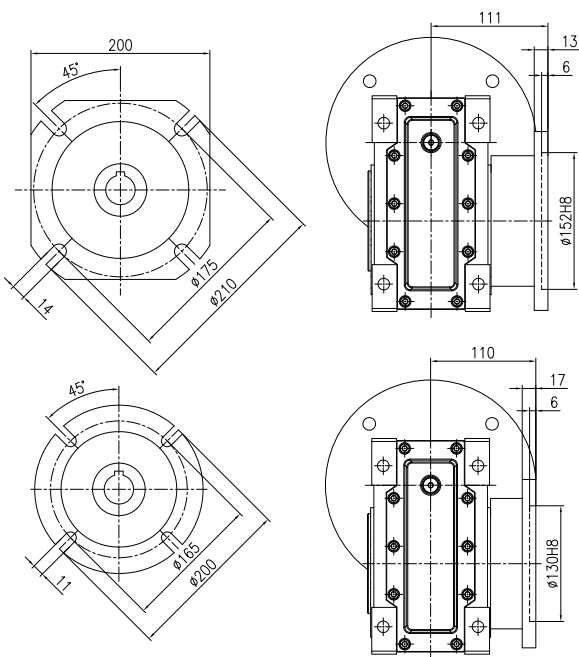
Weight without motor  
≈13.4kg

WKM 90C..



FA

FB



FC

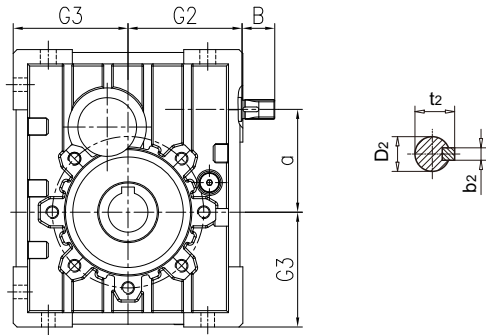
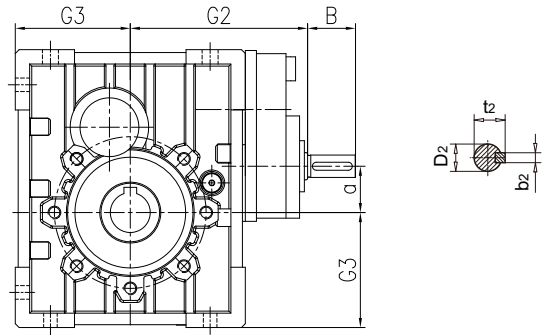
FD

| IEC   | DE8 | b | t    | P   | M   | N   | S   | T   | L  | D1H8                               | b1  | t1    |
|-------|-----|---|------|-----|-----|-----|-----|-----|----|------------------------------------|-----|-------|
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9   | 3.5 | 53 | 35                                 | 10  | 38.3  |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9   | 4   | 60 | 38*                                | 10* | 41.3* |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11  | 4   | 79 |                                    |     |       |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5 | 3.5 | 69 | * 非标产品，订单时请说明<br>* Only on request |     |       |
| 90B5  | 24  | 8 | 27.3 | 200 | 165 | 130 | 11  | 4   | 79 |                                    |     |       |
| 90B14 | 24  | 8 | 27.3 | 140 | 115 | 95  | 9   | 3.5 | 79 |                                    |     |       |
|       |     |   |      |     |     |     |     |     |    |                                    |     |       |
|       |     |   |      |     |     |     |     |     |    |                                    |     |       |

重量（不包括马达）  
≈14.6kg

Weight without motor  
≈14.6kg

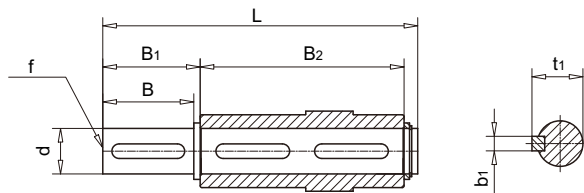
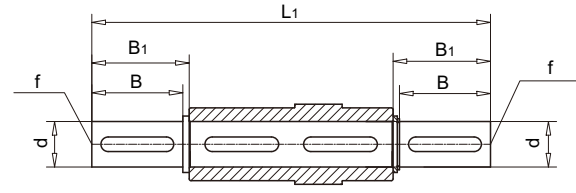
## 7.2 WKMS.. 外形尺寸 / Outline Dimension

**WKMS..B**

**WKMS..C**


|        | B    | D <sub>2j6</sub> | G <sub>2</sub> | G <sub>3</sub> | a    | b <sub>2</sub> | f <sub>2</sub> | t <sub>2</sub> |
|--------|------|------------------|----------------|----------------|------|----------------|----------------|----------------|
| WKM50B | 20.5 | 12               | 60             | 60             | 57   | 3              | M5             | 13.2           |
| WKM50C | 23   | 11               | 100            | 60             | 21.5 | 4              | M5             | 12.5           |
| WKM63B | 20.5 | 12               | 71.5           | 72             | 64.5 | 3              | M5             | 13.2           |
| WKM63C | 23   | 11               | 111            | 72             | 29   | 4              | M5             | 12.5           |
| WKM75B | 26.2 | 17               | 87             | 86             | 74.5 | 5              | M5             | 19             |
| WKM75C | 30   | 14               | 127            | 86             | 30.5 | 5              | M5             | 16             |
| WKM90B | 28   | 17               | 102            | 103            | 88   | 5              | M5             | 19             |
| WKM90C | 30   | 17               | 143            | 103            | 44   | 5              | M5             | 16             |

## 8. 附件尺寸图表 / ACCESSORIES OUTLINE DIMENSION SHEET

### 8.1 输出轴 / Output Shafts

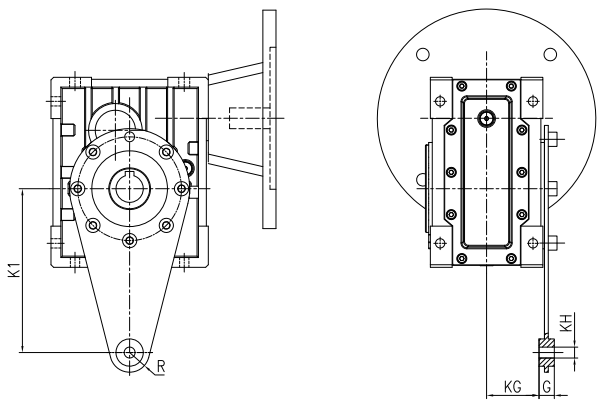

**DZ1,DZ2**

**SZ**

|       | d <sub>h6</sub> | B  | B <sub>1</sub> | G <sub>1</sub> | L   | L <sub>1</sub> | f   | b <sub>1</sub> | t <sub>1</sub> |
|-------|-----------------|----|----------------|----------------|-----|----------------|-----|----------------|----------------|
| WKM50 | 25              | 50 | 53.5           | 92             | 153 | 199            | M10 | 8              | 28             |
| WKM63 | 25              | 50 | 53.5           | 112            | 173 | 219            | M10 | 8              | 28             |
| WKM75 | 28              | 60 | 63.5           | 120            | 192 | 247            | M10 | 8              | 31             |
| WKM90 | 35              | 80 | 84.5           | 140            | 234 | 309            | M12 | 10             | 38             |

\* 非标产品，订单时请说明

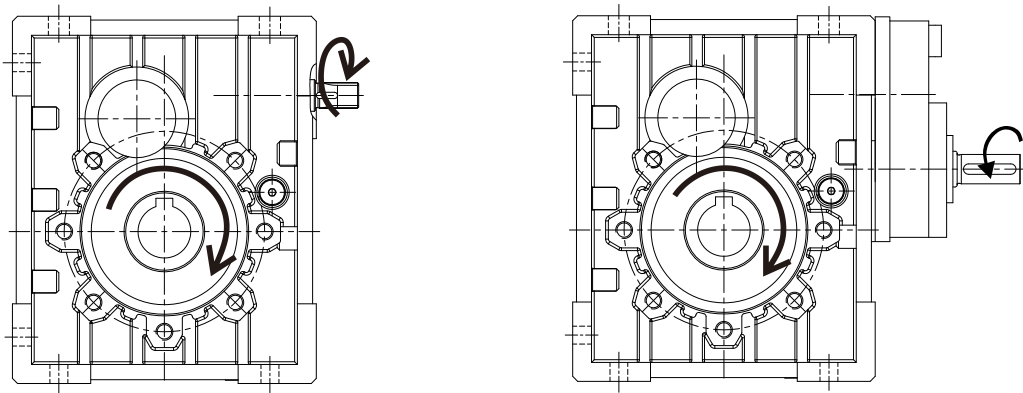
\* Only on request

8.2 WKM.. 扭力臂 / Torque Arm



|       | K1  | G  | KG   | KH | R  |
|-------|-----|----|------|----|----|
| WKM50 | 100 | 14 | 38.5 | 10 | 18 |
| WKM63 | 150 | 14 | 49   | 10 | 18 |
| WKM75 | 200 | 25 | 48   | 20 | 30 |
| WKM90 | 200 | 25 | 57.5 | 20 | 30 |

9. 旋转方向 / Direction of rotation



减速机在使用时，电机可正反转输入使用；推荐使用上图所示输入轴旋转方向为准双曲面齿轮最佳啮合方向。

The motor can be run either CW or CCW. When using with gearbox, the direction on chart is recommended

## 10. 安装 / INSTALLATION

### 10.1 注意事项 Note recommendations

1. 减速器与机械设备装配之前，要检查减速器输出轴的旋转方向是否正确。

Check whether the rotation direction of output shaft of reducer is correct before fitting to the machine.

2. 减速器与原动机、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、过松影响减速器性能。

Before connect with the prime mover and device, please check the reducer's every axial diameter, aperture, key and key slot, to be sure their dimensions are not deviation, and avoid assembling too tight or too loose, unless it will influence the reducer's performance.

3. 减速器必须牢固地安装在机械设备上，避免有松动或振动。

The mounting on the machine must be stable to avoid any vibration.

4. 尽可能地避免减速器暴露在烈日阳光下和恶劣环境中。

Whenever possible, protect the reduction unit against solar radiation and bad weather.

5. 如果减速器存放时间长达4-6个月，应检查油封是否浸润在润滑油中，若出现油封唇口会粘在轴上，或失去了弹性，请更换油封。

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. It is because the rubber could stick to the shaft or may even have lost the elasticity.

6. 与减速器的空心轴或实心轴配合连接时，应在轴上配合部分涂上润滑油，以免卡死或氧化。

When connect with hollow or solid shaft, please grease the joint to avoid lock or oxidation.

7. 使用时必须通过油位镜孔或打开油塞，检查油位。

Check the correct level of the lubricant through the oil mirror, if there is one.

8. 使用新减速器时，不能满负载起动，应该逐步增大负载。

Starting must take place gradually, without immediately applying the maximum load.

9. 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。

Supporting unit is required when using reducer that connect with motor directly, if the weight of motor is comparatively heavy.

10. 确保电机风扇附近有有良好的通风环境，以免影响散热效果。

Ensure the motor cools correctly by assuring good passage of air from the fan side.

11. 减速器的标准工作环境温度是-5℃至40℃，如果不在这范围时，请与我们技术服务人员联系。

Standard working temperatures should be between -5℃ to +40℃, if not, please call the Technical Service.

### 10.2 使用限制 Service restrictions

本样本给出的参数基本上是按通用减速机标准进行编制的。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：

Specification on this catalogue is organized according to standard of general reducer. It is also necessary to take due consideration of and carefully assess the following applications by calling our Technical Service:

1. 性能参数表基础上提高转速时；
2. 应用在惯性特别大的设备上时(惯性加速度系数 $f_a > 10$ )；
3. 当减速器出现故障有可能会对操作者造成危害时；
4. 应用在减速器过度疲劳状态时；
5. 工作环境温度低于 $-5^{\circ}\text{C}$ 或高于 $40^{\circ}\text{C}$ 时；
6. 在化学腐蚀环境中使用时；
7. 在盐性环境中使用时；
8. 在辐射性高的环境中使用时；
9. 在环境气压不在正常大气压力下使用时；
10. 安装方位在这样本中没有提到时。

避免把减速器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（当使用系数 $f_s=1$ 时）：这里最大负载扭矩是指能承受瞬间短暂的过载，它出现在过载启动、刹车、振动或其他动态操作环境中。

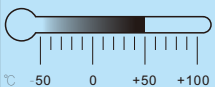
1. As speed increase based on datasheet
2. Applications when  $f_a > 10$ .
3. Use in services that could be hazardous for people if the reduction unit fails.
4. Applications with high dynamic strain on the case of the reduction unit.
5. When working temperature is under  $-5^{\circ}\text{C}$  or over  $40^{\circ}\text{C}$ .
6. Use in chemically aggressive environments.
7. Use in a salty environment.
8. Use in radioactive environments.
9. Use in environments pressures other than atmospheric pressure.
10. Mounting positions not mentioned 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.

## 11. 润滑油 / LUBRICATION

### 11.1 润滑油型号 / Types of lubrication

|       |  |  |  |  |  | 润滑油类型<br>lubrication type |
|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------|
| WKM.. | 标准<br>Standard<br>-10 +40                                                         | VG 220                                                                            | Shell Omala 220                                                                   | Mobilgear 630                                                                      | BP Energol GR-XP 220                                                                | 矿物油<br>Mineral oil        |
|       | 20 +25                                                                            | VG 150<br>VG 100                                                                  | Shell Omala 100                                                                   | Mobilgear 627                                                                      | BP Energol GR-XP 100                                                                |                           |
|       | -30 +10                                                                           | VG 68-46<br>VG 32                                                                 | Shell Tellus T 32                                                                 | Mobil D.T.E. 13M                                                                   |                                                                                     |                           |
|       | -40 -20                                                                           | VG 22<br>VG 15                                                                    | Shell Tellus T 15                                                                 | Mobil D.T.E. 11M                                                                   | BP Energol HLP-HM 15                                                                |                           |
|       | -40 +80                                                                           | VG 220                                                                            | Shell Omala HD 220                                                                | Mobil SHC 630                                                                      |                                                                                     | 合成油<br>Synthetic oil      |
|       | -40 +40                                                                           | VG 150                                                                            |                                                                                   | Mobil SHC 629                                                                      |                                                                                     |                           |
|       | -40 +10                                                                           | VG 32                                                                             |                                                                                   | Mobil SHC 624                                                                      |                                                                                     |                           |

### WKM.. 润滑油加注量 / Lubricant fill quantity

| 减速器型号<br>Gear units | 加注量 Fill quantity in liters |       |       |      |      |      | 单位：升(L) |
|---------------------|-----------------------------|-------|-------|------|------|------|---------|
|                     | B3                          | B6    | B7    | B8   | V5   | V6   |         |
| WKM50B              | 0.22                        | 0.20* | 0.13* | 0.15 | 0.25 | 0.14 |         |
| WKM50C#             | 0.07                        | 0.04  | 0.31  | 0.05 | 0.08 | 0.09 |         |
| WKM63B              | 0.42                        | 0.35* | 0.24* | 0.22 | 0.46 | 0.25 |         |
| WKM63C#             | 0.07                        | 0.04  | 0.04  | 0.05 | 0.08 | 0.09 |         |
| WKM75B              | 0.70                        | 0.58* | 0.42* | 0.42 | 0.75 | 0.45 |         |
| WKM75C#             | 0.13                        | 0.09  | 0.09  | 0.09 | 0.15 | 0.17 |         |
| WKM90B              | 1.21                        | 0.95* | 0.72* | 0.67 | 1.3  | 0.74 |         |
| WKM90C#             | 0.13                        | 0.09  | 0.09  | 0.09 | 0.15 | 0.17 |         |

规定的加注量为参考值。精准值的变化与级数和传动比有关。请您在加注润滑油时一定要注意油位螺栓所指示的精确油量。后期调整安装方式时，您必须根据改变后的安装方式相应调整加注润滑剂。上表中列出了不同安装方式(B3、B6、B7……)的减速机相应的标准参考润滑油注入量值。

The specified filling amount is a reference value. The change of the precision value is related to the number of stages and the transmission ratio. Please pay attention to the precise amount of oil indicated by the oil level bolt when adding lubricating oil. When you adjust the installation method later, you must adjust the lubricant according to the changed installation method. The above table lists the corresponding standard reference lubricant injection values for reducers with different installation methods (B3, B6, B7...).

#: 采用3级传动减速机时，各自加注3级箱体和2级箱体的润滑油，润滑油互不相通，表中的加注量为3级箱体润滑油加注量。

#: When using a 3-stage transmission reducer, fill the lubricating oil of the 3-stage tank and the 2-stage tank respectively, and the lubricating oil is not connected to each other. The filling amount in the table is the filling amount of the 3-stage tank.

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

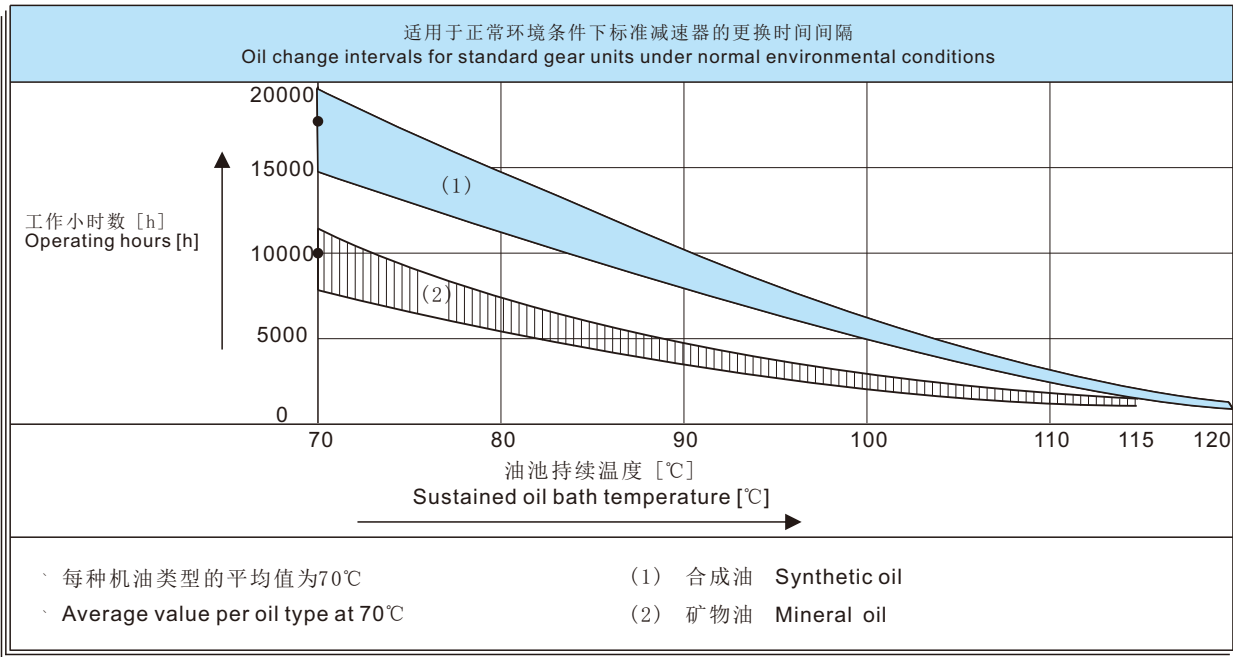
\*: It means that in this installation method, the oil level plug cannot be filled with lubricating oil only, the oil level must be higher than the oil level plug, and the filling amount is as shown in the table.

12. 维护

- 1). 新减速机在工作约300小时或三个月后，需更换润滑油，在换油时应使用合适的清洗剂小心地冲洗齿轮箱，不得将不同型号的润滑油混合使用。
- 2). 每3000工作小时，最低程度半年，应检测油以及油位，油封密封不严引起滴漏的常规检测，若是IEC输入的减速机，则检测检查弹性体，必要时进行更换。
- 3). 根据不同的工作条件（见下图）而定，最长每三年检测一次，更换润滑油，及轴承润滑油脂。
- 4). 根据不同的工作条件而定，更换输出轴上的油封。
- 5). 产品出现故障时，不要拆卸部件，请与本公司售后服务部门联系（需提供减速机规格、出厂日期、编号、已使用时间、主机名称、主机生产单位和故障类型）后，再采取合理的措施。

12. MAINTENANCE

- 1). For gear units, first oil change should be done after 300 working hours (run-in period) or three months. The right cleaning lotion is required to clean the gear units with care. Never mix the synthetic oil and mineral oil together.
- 2). Every 3000 working hrs, at least every 6 months, you have to check the oil and oil level, the seals visually for leakage. For IEC input type reducer, the elastomer should be tested or replaced if necessary.
- 3). Depending on the operating conditions (see chart below), every 3 years need inspection as longest period, including changing the mineral oil and replacing the bearing grease.
- 4). Depending on the operating conditions, change the oil seals on output shaft.
- 5). Once the malfunctions appear, stop disassembling the parts, and please contact the customer service (the information about specification, delivery date, series number, time used, name of machine, machine manufacturer, malfunction problems is required), then take the reasonable measures.



### 13. 存放

- 1). 防雨, 防雪, 防潮, 防尘, 防冲击。
- 2). 在设备和地面之间垫放木块或其他材料。
- 3). 开箱后暂不适用的齿轮减速器在其加工表面涂上防锈油, 并应及时放回包装箱内。
- 4). 对存放两年及更长时间的减速机, 在进行定期检查时, 应及时检查清洁度和机械损伤, 以及防锈层是否完好。

### 14. 定货须知

减速器定单请向我们提供以下信息:

- 1). 减速器型号标记(减速器类型、速比、功率和安装方式)。
- 2). 减速器表面喷涂颜色。
- 3). 订购数量。
- 4). 其他特殊要求。
- 5). 单位名称、联系人、联系电话。

### 13. STORAGE

- 1). Protected against rain and snow, no shock loads.
- 2). Lay the block or other material between the ground and equipment.
- 3). The opened but not used gear units should be added with the anti-corrosive oil on its surface, and then return to the packing containers intime.
- 4). If reducer is storage for 2 years or more, please check cleanliness and mechanical damage, and whether corrosion protection is still there.

### 14. NOTICE FOR ORDER

Please offer the following information when place the orders:

- 1). Type of the reducer(type, ratio, power and mounting position).
- 2). generally the gear units paint in silver.
- 3). Order quantity.
- 4). Other special requirements.
- 5). Company, contact person and telephone no.

## 15. 运转故障 / MALFUNCTIONS

### 15.1 减速器故障 / Gear unit malfunctions

| 故障                                                                                                                                            | 可能的原因                                                   | 解决办法                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------|
| 异常、均匀的运转噪声。                                                                                                                                   | A. 滚动/碾压噪声：轴承损坏。<br>B. 冲击型噪声：齿轮啮合不均匀。                   | A. 检测润滑油，更换轴承。<br>B. 请向客户服务部咨询。                                                     |
| 异常、不均匀的运转噪声。                                                                                                                                  | 机油中有异物。                                                 | <ul style="list-style-type: none"> <li>检测润滑。</li> <li>停止运转传动装置，向客户服务部咨询。</li> </ul> |
| 机油泄漏1)<br><ul style="list-style-type: none"> <li>在减速器盖上。</li> <li>在电机凸缘上。</li> <li>在电机轴密封圈上。</li> <li>在减速器凸缘上。</li> <li>在输出端轴密封圈上。</li> </ul> | A. 减速器底座上的橡胶密封发生渗漏。<br>B. 密封圈损坏。<br>C. 减速器没有排气。         | A. 拧紧各个外盖上的螺钉并且观察减速器。如果机油继续泄露，请向客户服务部咨询。<br>B. 请向客户服务部咨询。<br>C. 给减速器排气（参见“安装方式”）。   |
| 机油从排气阀旁渗出。                                                                                                                                    | A. 机油太多。<br>B. 传动装置安装方式错误。<br>C. 频繁冷起动（机油起泡沫）和/或者较高的油位。 | A. 修正油量（参见“润滑油”）。<br>B. 正确安装排气阀并且矫正油位（参见“安装方式”）。                                    |
| 尽管电机在运转或者传动轴已经被驱动，但是传动轴不转动。                                                                                                                   | 减速器中的轴轮毂联接断裂。                                           | 将减速器或减速电机送修。                                                                        |

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

| Problem                                                                                                                                                                                                                              | Possible cause                                                                                                             | Remedy                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unusual, regular running noise                                                                                                                                                                                                       | A. Meshing/grinding noise: Bearing damage.<br>B. Knocking noise: Irregularity in the gearing                               | A. Check the oil, change bearings<br>B. Contact customer service                                                                                                                                             |
| Unusual, irregular running noise                                                                                                                                                                                                     | impurity in the oil                                                                                                        | <ul style="list-style-type: none"> <li>Check the oil</li> <li>Stop the drive, contact customer service</li> </ul>                                                                                            |
| Oil leaking1)<br><ul style="list-style-type: none"> <li>From the gear cover plate</li> <li>From the motor flange</li> <li>From the motor oil seal</li> <li>From the gear unit flange</li> <li>From the output end oil sea</li> </ul> | A. Rubber seal on the gear cover plate is leaking<br>B. defective seal<br>C. Reducer is not vented                         | A. Tighten the bolts on the gear cover plate and observe the gear unit. If oil is still leaking, contact customer service<br>B. Contact customer service<br>C. Vent the gear unit (see "Mounting Positions") |
| Oil leaking from breaking valve                                                                                                                                                                                                      | A. Too much oil<br>B. Drive mounted in wrong mounting position<br>C. Frequent cold starts(oil foams) and/or high oil level | A. Correct the oil level (see Sec. "Inspection and Maintenance")<br>B. Mount the breather correctly (see Sec. "Mounting Positions")and correct the oil level (see "Lubricants")                              |
| Output shaft does not turn although the motor is running or the input shaft is rotated                                                                                                                                               | Connection between shaft and hub in reducer is cracked                                                                     | Send reducer to factory for repair                                                                                                                                                                           |

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

## 16. 减速器负载特征表 (参考件) / Charge Characteristic Chart (for reference)

|                                         |   |                                                 |   |
|-----------------------------------------|---|-------------------------------------------------|---|
| 风机类 AIR BLOWERS                         |   | 卷扬机齿轮传动装置 Hoisst gear assembly                  | A |
| 风机(轴向和径向) Air blower(axial or radial)   | A | 吊杆起落齿轮传动装置 Derrick gear assembly                | B |
| 冷却塔风扇 Fan of cooling tower              | B | 转向齿轮传动装置 Stering gear assembly                  | B |
| 引风机 Induced draught fan                 | B | 行走齿轮传动装置 Moving gear assembly                   | C |
| 螺旋活塞式风机 Rotary piston type fan          | B | 挖泥机类 LAND DREDGER                               |   |
| 蜗轮式风机 Turbo-fan                         | A | 筒式传送机 Drum-type coveyer                         | C |
| 建筑机械类 CONSTRUCTION MACHINERY            |   | 筒式转动机 Drum-type rotation wheel                  | C |
| 混凝土搅拌机 Concrete mixer                   | B | 挖泥头 Dredger head                                | C |
| 卷扬机 Hoist                               | B | 机动绞车 Powered crab                               | B |
| 路面建筑机械 Road building machinery          | B | 泵 Pump                                          | B |
| 钻孔机 Boring mill                         | B | 泵转动齿轮传动装置 Pump turning gear assembly            | B |
| 化工机械类 CHEMICAL MACHINERY                |   | 行走齿轮传动装置(履带) Moving gear assembly (apron wheel) | C |
| 搅拌机(液体) Mixer (liquid)                  | A | 行走齿轮传动装置(铁轨) Moving gear assembly(track)        | B |
| 搅拌机(半液体) Mixer (half liquid)            | B | 食品工业机械类 FOODSTUFF PROCESSING MACHINERY          |   |
| 离心机(重型) Centrifuge (heavy)              | B | 灌注及装箱机器 Placer or box filler                    | A |
| 离心机(轻型) Centrifuge (light)              | A | 甘蔗压榨机 Cane crusher                              | A |
| 冷却滚筒** Cooling rolling drum             | B | 甘蔗切断机** Cane cutter                             | B |
| 干燥滚筒** Dry rolling drum                 | B | 甘蔗粉碎机** Cane crasher                            | C |
| 搅拌机 Mixer                               | B | 搅拌机 Mixer                                       | B |
| 压缩机类 COMPRESSOR                         |   | 酱状物吊筒 Paste bucket                              | B |
| 活塞式压缩机 Piston type compressor           | C | 包装机 Packager                                    | A |
| 涡轮式压缩机 Turbo-compressor                 | B | 糖和甜菜切断机 Beet slicer                             | B |
| 传送运输机类 TRANSMISSION FREIGHTER           |   | 糖和甜菜清洗机 Beet washing machine                    | B |
| 平板传送机 Pan conveyer                      | B | 发动及转换器类 MOTOR AND CONVERSION EQUIPMENTS         |   |
| 平衡块升降机 Balance lifter                   | B | 频率转换器 Frequency converter                       | C |
| 槽式传送机 Trough conveyer                   | B | 发动机 Motor                                       | C |
| 带式传送机(大件) Ribbon conveyer (large piece) | C | 焊接发动机 Welding motor                             | C |
| 带式传送机(碎料) Ribbon conveyer (small piece) | B | 洗衣机类 WASHING MACHINE                            |   |
| 筒式面粉传送机 Drum-type flour conveyer        | A | 滚筒 Rolling drum                                 | B |
| 链式传送机 Chain conveyer                    | B | 洗衣机 Washing machine                             | B |
| 环式传送机 Ring type conveyer                | B | 金属滚轧机类 METAL ROLLER MACHINE                     |   |
| 货物升降机 Lifter                            | B | 钢坯剪断机** Steel cutter                            | C |
| 卷扬机 Hoist                               | B | 链式输送机** Chain conveyer                          | B |
| 连杆式传送机 Crank-connecting conveyer        | B | 冷轧机** Cold mill                                 | C |
| 载入升降机 Lifter                            | B | 连铸成套输送机 Continuous casting equipments           | B |
| 螺旋式传送机 Worm conveyer                    | B | 冷床** Cold bed                                   | B |
| 钢带式传送机 Steel-band conveyer              | B | 剪料机头** Cropper                                  | C |
| 链式槽型传送机 Chain reed-type conveyer        | B | 交叉转弯输送机** Cross steering transmitter            | B |
| 绞车运输机 Crab freighter                    | B | 除锈机** Deruster                                  | C |
| 起重机类 HOIST                              |   | 重型和中型板轧机** Heavy and medium steel mill          | C |
| 转臂式起重传动齿轮装置 Bracket swing gear assembly | B | 棒坯切轧机** Bar mill                                | C |

|                                                           |   |                                            |   |
|-----------------------------------------------------------|---|--------------------------------------------|---|
| 棒坯转运机类 BAR TRANSMISSION EQUIPMENTS                        | B | 泵类 PUMPS                                   |   |
| 棒坯堆料机 Bar pusher                                          | B | 离心泵(稀液体) Centrifugal pump (thin liquid)    | A |
| 推床 Push bed                                               | B | 离心泵(半液体) Centrifugal pump (half liquid)    | B |
| 剪板机** Shears                                              | C | 活塞泵 Displacement pump                      | C |
| 板材摆升降台** Lumber elevator platform                         | B | 柱塞泵 Plunger pump                           | C |
| 轧辊调整装置 ROLL ADJUSTING EQUIPMENTS                          | B | 压力泵 Force pump                             | C |
| 辊式矫直机 Roller leveling machine                             | B | 塑料机械类 PLASTIC EQUIPMENTS                   |   |
| 轧钢机辊道(重型)** Mill rolling way (heavy)                      | C | 压光机** Glazing press                        | B |
| 轧钢机辊道(轻型)** Mill rolling way (light)                      | B | 挤压机** Ejecting press                       | B |
| 薄板轧机** Sheet rolling mill                                 | C | 螺旋压出机** Spiral extruding machine           | B |
| 修整剪切机** Trimming shears                                   | B | 混合机** Mixing machine                       | B |
| 焊管机 Pipe welder                                           | C | 橡胶机械类 RUBBER EQUIPMENT                     |   |
| 焊管机(带材和线材) Soldering machine (belt material and wire rod) | B | 压光机** Glazing press                        | B |
| 线材拉拔机 Wire drawbench                                      | B | 挤压机** Ejecting press                       | C |
| 金属加工机床类 METAL PROCESSING MACHINE TOOLS                    |   | 混合搅拌机** Mixing stir machine                | B |
| 动力轴 Power shaft                                           | A | 捏合机 Kneading machine                       | B |
| 锻造机 Drop hammer                                           | C | 滚压机** Roller machine                       | C |
| 锻锤 Machine tool and necessary                             | C | 石料、瓷土料加工机械类                                |   |
| 机床及辅助装置 Machine tool and necessary                        | A | STONE PORCELAIN CLAY PROCESSING EQUIPMENTS |   |
| 机床及主要传动装置 Machine tool and main driving equipment         | B | 球磨机 Ball crusher                           | B |
| 金属刨床 Metal facing machine                                 | C | 挤压料破碎机** Ejecting press and breaker        | C |
| 板材矫直机床 Plate-leveling machine tool                        | C | 破碎机 Breaker                                | C |
| 冲床 Backing-out punch                                      | C | 压砖机 Brick press                            | C |
| 冲压机床 Press machine tool                                   | C | 锤料破碎机** Beating crusher                    | C |
| 剪床 Cutting machine                                        | B | 转炉** Converter                             | C |
| 薄板弯曲机床 Sheet bending machine tool                         | B | 筒型磨机** Cylinder mill                       | C |
| 石油工业机械类 PETROLEUM PROCESSING MACHINERY                    |   | 纺织机械类 TEXTILE MACHINERY                    |   |
| 输油管油泵** Pump of oil pipe line                             | B | 送料机 Feeding machine                        | B |
| 转子钻井设备 Rotary drilling equipment                          | C | 织布机 Loom machine                           | B |
| 制纸机类 PAPERING MACHINE                                     |   | 印染机 Dyeing machine                         | B |
| 压光机** Glazing press                                       | C | 精制筒 Purified drum                          | B |
| 多层纸板机** Multilayer paper board machine                    | C | 威罗机 Welon machine                          | B |
| 干燥滚筒** Drying cylinder                                    | C | 水处理设备类 WASTER TREATMENT EQUIPMENTS         |   |
| 上光滚筒** Glazing cylinder                                   | C | 鼓风机** Air blast                            | B |
| 搅浆机** Masher                                              | C | 螺杆泵 Screw pump                             | B |
| 搅浆擦碎机** Mashing and breaking machine                      | C | 木料加工机床 WOOD PROCESSING MACHINE TOOL        |   |
| 吸水滚** Suction roll                                        | C | 剥皮机 Barker                                 | C |
| 潮纸滚压机** Wet oaoer roller machine                          | C | 刨床 Facing machine                          | B |
| 吸水滚压机** Water absorbing roller machine                    | C | 锯床 Saw bench                               | C |
| 威罗机 Welon machine                                         | C | 木材加工机床 Wood processing machine tool        | A |

注：A—均匀冲击负载；B—中等冲击负载；C—重冲击负载；\*\*—用于24小时工作制。

Note: A - Uniform load; B - Moderate shock load; C - Heavy shock load; \*\* - for 24hour system.

# 备忘录

## 备忘录