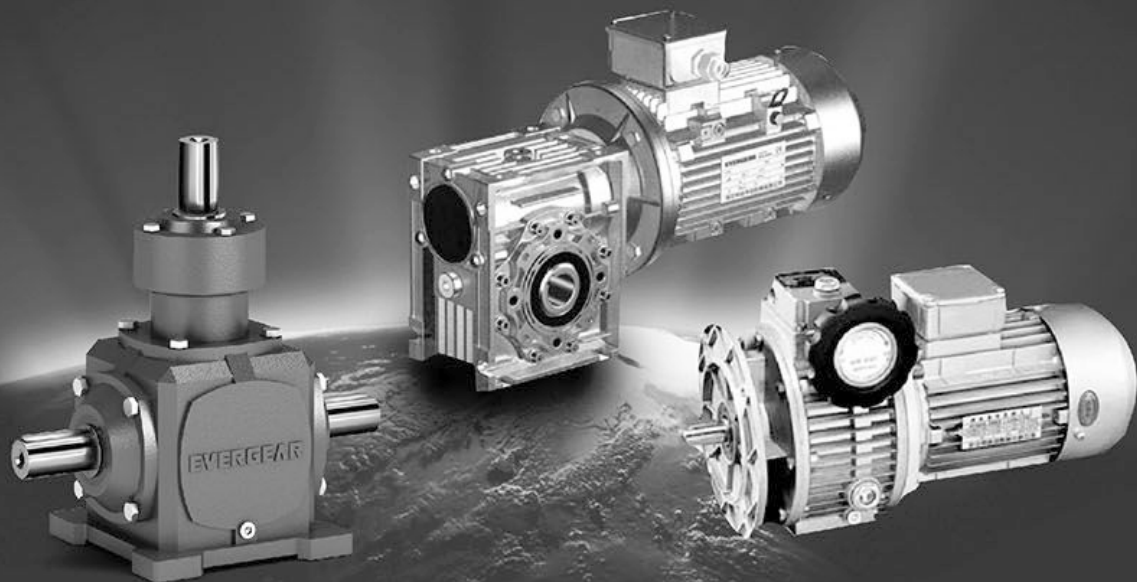


OTHER Series

Z系列弧齿锥齿轮减速机
Z Series Spiral Bevel Gear Reducer

MB无级变速器
MB Variable Speed Machine

NMRV蜗轮减速机
NMRV Worm Wheel Reducer



EVERGEAR



① 概述
Summarize

- 1.Z系列弧齿锥齿轮减速机是一级弧齿锥齿轮传动箱，传动比有1、1.5、2、2.5、3。
 - 2.传动效率高，单机型减速机效率高达96%。
 - 3.有单横轴、单纵轴、双纵轴可选。
- 1.Z series bevel helical gear reductor is the first stage gear case with transmission ratio of 1,1.5,2,2.5 and 3.
- 2.High transmission efficiency. A single machine can reach a transmission efficiency as much as 96%.
 - 3.There are single transverse shaft, single longitude shaft and double longitude shafts for select.

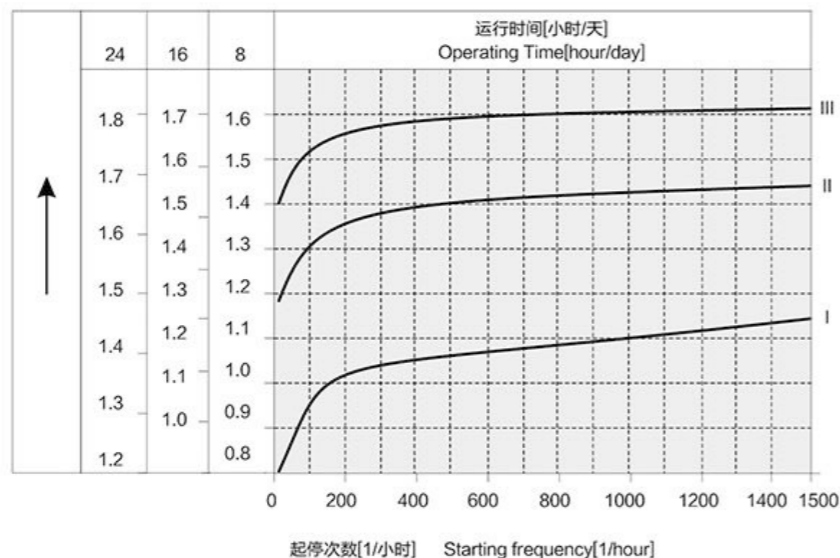
② 场所条件
Working Environment:

- 1.环境温度-40℃~50℃。(0° C以下启动时润滑油要加热到0° C以上。)
 - 2.海拔不超过1000米。
 - 3.输入转速不大于1800rpm，齿轮最高圆周速度不超过22m/s。
 - 4.可用于正反旋转。
 - 5.无行业限制。
 - 6.其他条件下使用请与我公司技术部联系。
- 1.Working temperature: -40℃~50℃ (The lubrication should be heated until above 0℃ if the machine works Below 0℃.)
- 2.The working place should be lower than 1,000 meters above sea level.
 - 3.The input rotational speed should not exceed 1,800r/m. The circumferential speed of the gear should not exceed 22m/s.
 - 4.Suitable for normal-reverse rotation.
 - 5.Without industry limitation.
 - 6.Please consult our technical supporting department for other circumstances.

③ 选型指南
Instructions for Selection

在确定使用系数之前必须先确定一天的运行小时数，每小时的起停次数和负载类型。其中负载类型按下列公式计算：
The daily operating time, the starting frequency and the load classifications must be determined before deciding the service factor. The load classifications is calculated with the following formula:

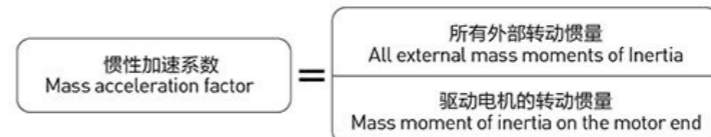
工况系数 f_A Operating Mode Factor f_A



负载类型 Load classification

- I 均匀负载，惯性加速系数在 ≤ 0.2
Uniform load, mass acceleration factor ≤ 0.2
- II 中等冲击负载，惯性加速系数 ≤ 3
Medium Impact load, mass acceleration factor ≤ 3
- III 强烈冲击负载，惯性加速系数 ≤ 10
Heavy shock load, mass acceleration factor ≤ 10

⚠ 如果惯性加速系数 > 10，请与我公司技术部联系。
Please contact our technical supporting department in case the mass acceleration factor > 10.



选型时必须满足下式：
Type selection should meet the following formula:

$$\text{减速机的许用输入功率} \geq \text{减速机的输入功率} \times \text{工况系数 } f_A$$

Permissible input power of reductor \geq Input power of reductor \times Operating mode factor f_A

⚠ 注 Notes

1. 减速机的许用输入功率已在后面的选型参数表中列出。
2. 输出轴端允许的径向载荷及轴向载荷资料，请与我公司技术部联系。
3. 减速机的使用与维护请参阅随机附带的《减速变速器使用说明书》。

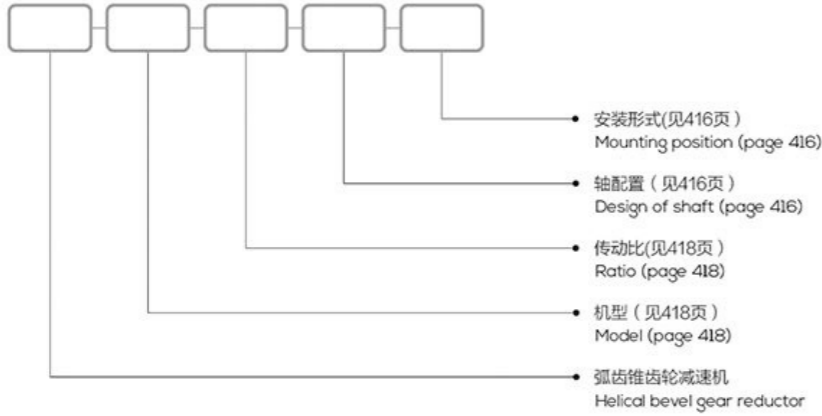
1. Permissible input power of reductor is listed in the parameter selection table.

2. Please contact our technical supporting department for the information on the permitted overhung loads and the axial forces at the end of the output shaft.

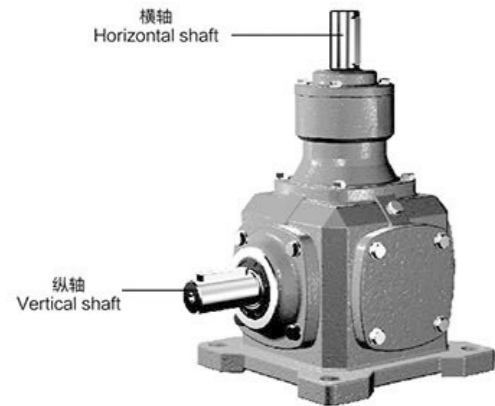
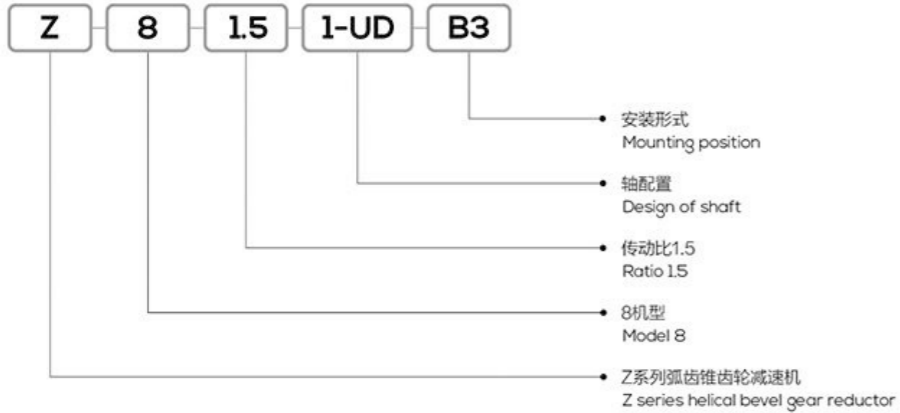
3. Regarding the use and maintenance of the reductor, please refer to the attached «Instruction Manual of the Reductor and the Variable Speed Motor» .



4 型号说明
Instructions for Models:



示例
Sample

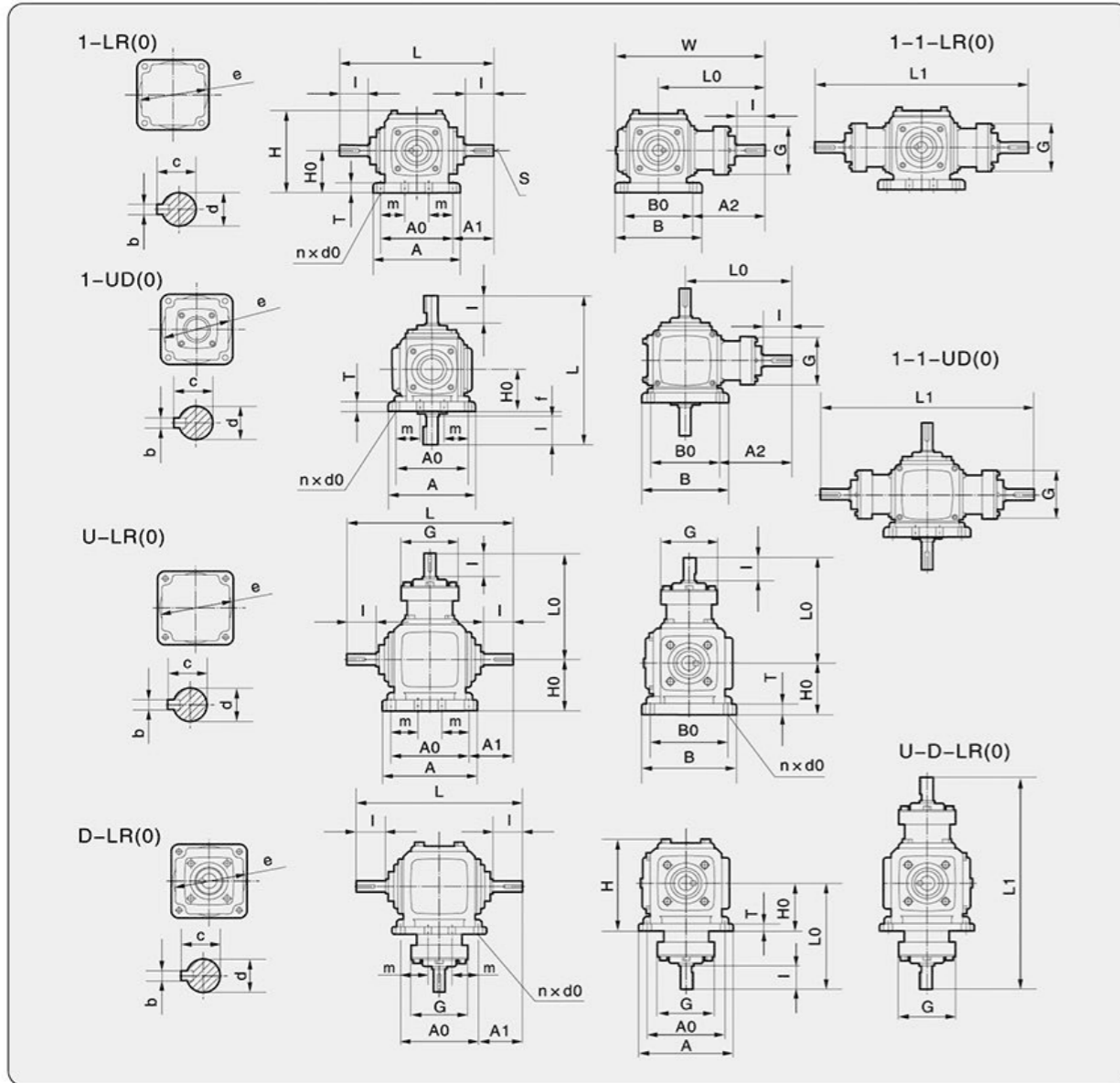


注: 当横轴输入时, Z系列螺旋锥齿轮减速机为减速。
当纵轴输入时, Z系列螺旋锥齿轮减速机为增速。

Note: Z series bevel helical gear reducer is deceleration when inputting horizontal shaft.
Z series bevel helical gear reducer is acceleration, when inputting vertical shaft.

安装形式图 Mounting Position Example

| 轴配置轴旋转方向关系 The relationship between design of shaft and direction of shaft | | | 安装形式 Mounting position | | |
|---|-------------|-------------|---------------------------|--|--|
| 1-LR | 1-R | 1-L | | | |
| 1-LR-O | 1-R-O | 1-L-O | | | |
| 1-UD | 1-U | 1-D | | | |
| 1-UD-O | 1-U-O | 1-D-O | | | |
| U-LR | U-R | U-L | | | |
| U-LR-O | U-R-O | U-L-O | | | |
| D-LR | D-R | D-L | | | |
| D-LR-O | D-R-O | D-L-O | | | |
| 1-1-LR | 1-1-R | 1-1-L | | | |
| 1-1-LR-O | 1-1-R-O | 1-1-L-O | | | |
| 1-1-UD | 1-1-U | 1-1-D | | | |
| 1-1-UD-O | 1-1-U-O | 1-1-D-O | | | |
| U-D-LR | U-D-R | U-D-L | | | |
| U-D-LR-O | U-D-R-O | U-D-L-O | | | |



| 型号 Model | 安装尺寸 Installation dimensions | | | | 轴伸尺寸 Shaft dimensions | | | | 外形尺寸 Overall dimensions | | | | | | | | | | | 重量 weight Kg | | | | |
|-------------|---------------------------------|-----|-----|-------|--------------------------|-----|-----|------|----------------------------|----|------|-----|-----|-----|-----|-----|-----|-------|-----|--------------------|----|------|-------|-----|
| | H0 | A0 | B0 | A1 | A2 | m | L0 | nxd0 | d | b | c | i | S | L | H | A | B | W | G | | T | f | L1 | ex深 |
| Z2 | 52 | 84 | 84 | 48 | 82 | 0 | 124 | 4x9 | 15 | 5 | 17 | 30 | M4 | 180 | 100 | 100 | 100 | 174 | 74 | 10 | 6 | — | 94x3 | 4 |
| Z4 | 76 | 125 | 125 | 53.5 | 117.5 | 0 | 180 | 4x11 | 19 | 6 | 21.5 | 38 | M5 | 232 | 145 | 155 | 155 | 257.5 | 79 | 17 | 2 | 360 | 145x5 | 10 |
| Z6 | 90 | 152 | 152 | 81 | 146 | 0 | 222 | 4x14 | 25 | 8 | 28 | 50 | M6 | 314 | 175 | 190 | 190 | 317 | 98 | 17 | 17 | 444 | 175x5 | 21 |
| Z7 | 100 | 174 | 174 | 86 | 178 | 0 | 265 | 4x14 | 32 | 10 | 35 | 60 | M8 | 346 | 198 | 210 | 210 | 370 | 116 | 22 | 13 | 530 | 205x5 | 32 |
| Z8 | 115 | 195 | 195 | 110.5 | 210.5 | 0 | 308 | 4x14 | 40 | 12 | 43 | 75 | M10 | 416 | 225 | 235 | 235 | 425.5 | 136 | 22 | 18 | 616 | 240x5 | 49 |
| Z10 | 140 | 240 | 240 | 120 | 240 | 0 | 360 | 4x16 | 45 | 14 | 48.5 | 90 | M12 | 480 | 270 | 285 | 285 | 502.5 | 156 | 25 | 10 | 720 | 295x5 | 78 |
| Z12 | 175 | 290 | 290 | 130 | 270 | 0 | 415 | 4x21 | 50 | 14 | 53.5 | 100 | M16 | 550 | 340 | 340 | 340 | 585 | 180 | 32 | 0 | 830 | 350x5 | 124 |
| Z16 | 200 | 330 | 330 | 150 | 290 | 0 | 455 | 4x25 | 60 | 18 | 64 | 105 | M20 | 630 | 410 | 390 | 390 | 606 | | 40 | 10 | 910 | 420x5 | 188 |
| Z20 | 245 | 330 | 430 | 195 | 330 | 110 | 545 | 8x21 | 72 | 20 | 76.5 | 105 | M20 | 720 | 485 | 410 | 490 | 800 | | 32 | 10 | 1090 | 360x5 | 297 |
| Z25 | 290 | 390 | 520 | 235 | 400 | 130 | 660 | 8x24 | 85 | 22 | 90 | 130 | M20 | 860 | 587 | 480 | 580 | 957 | | 35 | 10 | 1320 | 430x5 | 488 |

| 传动比 Ratio | 输入转速 (r/min) Input speed | 输出转速 (r/min) output speed | Z2 | Z4 | Z6 | Z7 | Z8 | Z10 | Z12 | Z16 | Z20 | Z25 |
|--------------|--------------------------------|---------------------------------|-------------------------|-------|-------|-------|-------|-------|------|------|------|------|
| | | | 输入功率(kW) input power | | | | | | | | | |
| 1 | 1450 | 1450 | 1.79 | 4.19 | 14.9 | 22 | 45.6 | 65.3 | 96 | 163 | | |
| | 1150 | 1150 | 1.43 | 3.46 | 12.7 | 18.4 | 37.5 | 55.7 | 81.1 | 139 | 234 | |
| | 870 | 870 | 1.12 | 2.45 | 10.5 | 15.2 | 29 | 44.6 | 67.5 | 114 | 193 | 335 |
| | 580 | 580 | 0.747 | 1.72 | 7.35 | 11.4 | 19.8 | 30.6 | 49.7 | 85.9 | 145 | 252 |
| | 400 | 400 | 0.524 | 1.3 | 5.2 | 8.34 | 14 | 21.5 | 35.1 | 66.1 | 112 | 195 |
| | 300 | 300 | 0.396 | 0.88 | 3.93 | 6.35 | 10.6 | 16.4 | 26.8 | 54.1 | 90.8 | 159 |
| | 200 | 200 | 0.266 | 0.448 | 2.66 | 4.3 | 7.23 | 11.1 | 18.2 | 39.3 | 69.0 | 119 |
| | 100 | 100 | 0.136 | 0.046 | 1.36 | 2.2 | 3.7 | 5.72 | 9.36 | 20.3 | 35.3 | 60.0 |
| 1.5 | 1450 | 967 | | | 12.1 | 15 | 19.1 | 38.7 | 58.3 | | | |
| | 1150 | 767 | | | 9.96 | 12 | 15.4 | 31.2 | 49.2 | | | |
| | 870 | 580 | | | 7.66 | 9.3 | 11.8 | 24.1 | 40.7 | | | |
| | 580 | 387 | | | 5.23 | 6.32 | 8.14 | 16.4 | 28.9 | | | |
| | 400 | 267 | | | 3.66 | 4.41 | 5.7 | 11.6 | 20.3 | | | |
| | 300 | 200 | | | 2.77 | 3.35 | 4.34 | 8.78 | 15.5 | | | |
| | 200 | 133 | | | 1.87 | 2.28 | 2.91 | 5.95 | 10.5 | | | |
| | 100 | 37 | | | 0.957 | 1.16 | 1.49 | 3.04 | 5.37 | | | |
| 2 | 1450 | 725 | 0.94 | 2.67 | 7.9 | 10.6 | 14 | 23.6 | 40 | 73.7 | 126 | |
| | 1150 | 575 | 0.74 | 2.04 | 6.39 | 8.55 | 11.3 | 19 | 31.7 | 59.5 | 102 | 119 |
| | 870 | 435 | 0.56 | 1.38 | 4.88 | 6.56 | 8.7 | 14.6 | 24 | 46.0 | 79.0 | 155 |
| | 580 | 290 | 0.37 | 0.96 | 3.34 | 4.47 | 5.92 | 10 | 16.3 | 31.3 | 54.2 | 107 |
| | 400 | 200 | 0.26 | 0.73 | 2.33 | 3.12 | 4.15 | 7.02 | 11.5 | 22.0 | 38.0 | 75.4 |
| | 300 | 150 | 0.19 | 0.49 | 1.76 | 2.37 | 3.14 | 5.33 | 8.71 | 16.7 | 29.0 | 57.4 |
| | 200 | 100 | 0.13 | 0.3 | 1.18 | 1.59 | 2.12 | 3.61 | 5.89 | 11.3 | 19.7 | 39.2 |
| | 100 | 50 | 0.06 | 0.026 | 0.608 | 0.812 | 1.08 | 1.84 | 3.01 | 5.84 | 10.1 | 20.1 |
| 2.5 | 1450 | 580 | | | 5.97 | 6.99 | 11.4 | 18.2 | 31.4 | | | |
| | 1150 | 460 | | | 4.78 | 5.64 | 9.11 | 14.7 | 25.3 | | | |
| | 870 | 348 | | | 3.68 | 5.3 | 7 | 11.2 | 19.5 | | | |
| | 580 | 232 | | | 2.48 | 2.92 | 4.76 | 7.68 | 13.3 | | | |
| | 400 | 160 | | | 1.73 | 2.05 | 3.34 | 5.38 | 9.32 | | | |
| | 300 | 120 | | | 1.32 | 1.55 | 2.53 | 4.06 | 7.08 | | | |
| | 200 | 80 | | | 0.888 | 1.05 | 1.71 | 2.75 | 4.79 | | | |
| | 100 | 40 | | | 0.448 | 0.528 | 0.867 | 1.4 | 2.43 | | | |
| 3 | 1450 | 483 | | | 4.84 | 5.42 | 8.2 | 14 | 23.6 | 48.2 | 82.3 | 158 |
| | 1150 | 383 | | | 3.88 | 4.34 | 6.55 | 11.3 | 19 | 38.9 | 66.6 | 130 |
| | 870 | 290 | | | 2.97 | 3.34 | 5.04 | 8.66 | 14.6 | 30.1 | 51.6 | 101 |
| | 580 | 193 | | | 2.02 | 2.25 | 3.42 | 5.89 | 9.92 | 20.4 | 35.4 | 69.9 |
| | 400 | 133 | | | 1.41 | 1.58 | 2.39 | 4.11 | 6.98 | 14.4 | 24.8 | 49.3 |
| | 300 | 100 | | | 1.07 | 1.18 | 1.8 | 3.11 | 5.29 | 10.9 | 18.9 | 37.6 |
| | 200 | 67 | | | 0.712 | 0.803 | 1.22 | 2.1 | 3.57 | 7.38 | 12.9 | 25.6 |
| | 100 | 33 | | | 0.363 | 0.409 | 0.618 | 1.07 | 1.82 | 3.82 | 6.60 | 13.1 |
| 10 | 3 | | | 0.037 | 0.042 | 0.064 | 0.11 | 0.188 | 0.40 | 0.69 | 1.4 | |

注：1.表中没有的转速值按插入法计算。
 2.横轴转速超过1450r/min时，向我公司咨询。
 3.横轴转速未达到10r/min时，请使用10r/min的数据。
 4.本表使用系数一律为1.0。
 5.本表全部为减速(除1以外)传动的输入功率，当需要增速时，输入功率的数据应除以减速比。

Note: 1. If speed is not list in table, please calculated with inserting method.
 2. Please consult us, when the speed of horizontal shaft is more than 1450r/min.
 3. Please refer to the parameter of 10r/min in the table when the speed of horizontal shaft is less than 10r/min.
 4. The service factor of table is 1.0.
 5. All input power of table (except for 1) is for deceleration transmission. It's essential that the parameter of input power should divide ratio.