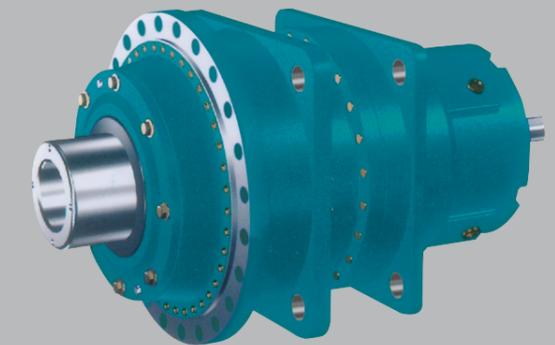


T A I L O N G



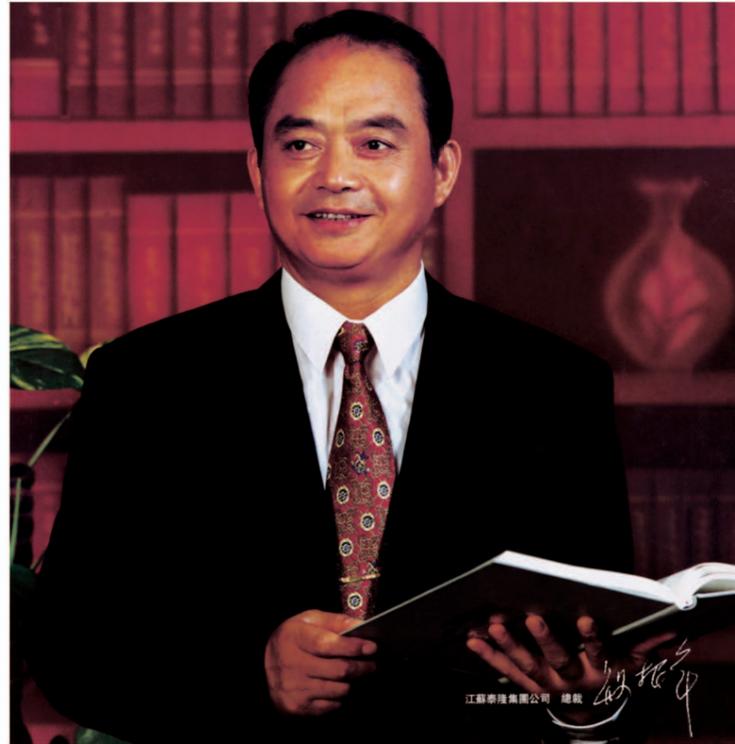
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新一代TPB系列  
行星齿轮减速器

**江苏泰隆机械集团**  
 JIANGSU TAILONG MACHINERY GROUP COMPANY  
**江苏泰隆减速机股份有限公司**  
 JIANGSU TAILONG DECELERATOR MACHINERY CO.,LTD.



### Company Brief

Tailong Group is located in Taixing urban area at the border of Yangtse River and it is a state-owned large-sized enterprise boasted by Taixing people. Under the leadership of Mr. Yin genzhang, a nationwide excellent entrepreneur and a model worker of Jiangsu Province, after more than twenty years of operation with concentrated efforts, has proudly marched into the Top 500 enterprises in Chinese Mechanical Industry and has become the industry leader.

At present, the group owns a total assets of RMB 580m, and fixed of RMB 360m, and it covers an area of 600,000 square meters and owns almost 2,612 employees, including 896 technicians, the annual turnover surpasses 1b RMB. The introduced large-sized numerical controlled gear grinding machine, worm grinder, machining center and carbonitriding kiln and etc. advanced, precise and leading manufacturing facilities and inspection apparatus from USA, Germany, Japan and Russia has taken part 48% share in all. At the same time, the group has established a test center with the most complete test functions, the biggest test power, the most advanced instrument and the provincial science & technology park. At the basis of the primary secondary envelope, 9000 series cycloid pinwheel reducer, cylindrical gear, planetary reducer and so on, more than ten series, and several ten thousands specifications, adopting the advanced modularization, point-line technique, ultimately develop TL modular reducer, TPB planetary modular reducer, heavy load modular and point-line meshing decelerator. Along many years, harden-faced reducer for crane, moderate rigid reducer provide the best transmission project for customer all the times; On the other hand, at the wind and water power area, we have taken the swift-footed arrive first, and taken out outstanding success. The heavy load gearboxes has successfully applied in architecture, metallurgy industry, and developed vertical grinder, marginal transmission grinder gearbox which fit for architecture industry, open, convolute gearbox, three-ring, star reducer which special for metallurgy. In addition, the company also supply sugar mill gearbox, worm lifter, electrical roller and various non-standard gearboxes.

The company has been awarded successively with such honorable titles as "China top brand", "National first batch of enterprise honoring contracts and keeping promises", "National key new & hi-tech enterprise", "National mechanical industry quality & benefit type enterprise", "National mechanical industry QC award" and "National customer satisfaction service". Tailong brand is recognized as "the Chinese famous brand" by national industrial and commercial bureau. It has taken the lead in passing the quality, environment and security three in one system certification and ISO10012 metering system certification.

Tailong people will keep to its persistent quality guarantee, service guarantee and credit, satisfying customer as our topmost pursuit.

### 公司简介

泰隆集团地处扬子江畔的泰兴市区，是泰兴人引以为豪的国家大型企业。集团在全国优秀企业家、江苏省劳动模范董事长殷根章的领导下，经过20多年的悉心经营，昂首迈进了中国机械工业500强，成为全国减变行业龙头老大。

集团现拥有总资产5.8亿元，固定资产3.6亿元，占地面积60万平方米，员工近2612人，专业工程技术人员896人，年销售额15亿元。从美国、德国、日本、俄罗斯等国家引进的大型数控磨齿机、蜗杆磨床、加工中心、碳氮共渗炉等一批高精尖的生产设备和检测设备占48%。建立了全国同行业中检测功能最全、检测功率最大、仪器最先进的测试中心，创建了省级工程技术中心。公司产品在原有的平面二次包络蜗杆减速器、9000系列摆线针轮减速机、圆柱齿轮减速器、行星齿轮减速器等十几个系列，几十万种规格的基础上，采用先进的模块化、点线等技术开发出了TL模块化齿轮减速电机；TPB行星模块化减速器、重载模块化减速器、点线啮合减速器。多年来，起重机用硬齿面、中硬齿面减速器一直在为用户提供最佳的传动方案，在风力发电、水力发电领域捷足先登，做出了不菲的业绩。重载齿轮箱在建材行业、冶金行业成功得到了应用，开发出了建材行业的立式磨机及边缘传动磨机齿轮箱，冶金行业的开卷、卷取齿轮箱、三环减速器、星轮减速器。另外公司还为用户提供榨糖机齿轮箱、螺杆升降机、电动滚筒及各类非标齿轮箱。公司荣获“中国名牌”，“全国首批守合同重信用企业”，“全国重点高新技术企业”，“全国机械工业质量效益型先进企业”，“全国机械工业质量管理奖”，“全国用户满意服务”等殊荣，泰隆商标被评为“中国驰名商标”，在同行业中率先通过质量、环境、安全三位一体认证及ISO10012计量体系确认。

泰隆人将遵循自己一贯的质量承诺、服务承诺和信誉承诺，把顾客满意当作我们的最高追求！

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**TPB系列行星减速器类型说明**

TPB series planetary gear units explanation of types

TPB系列行星减速器类型

TPB2N—二级行星齿轮传动

TPB2L—直交轴、二级行星齿轮传动

TPB2S—平行轴、二级行星齿轮传动

TPB2K—直交轴、平行轴、二级行星齿轮传动

TPB3N—三级行星齿轮传动

TPB3S—平行轴、三级行星齿轮传动

TPB3K—直交轴、平行轴、三级行星齿轮传动

TPB series planetary gear units type

TPB2N—2-stage planetary gear units

TPB2L—bevel,2-stageplanetary gear units

TPB2S—helical,anetary gear units

TPB2K—bevel-helical,2-stageplanetary gear units

TPB3N—3stageplanetary gear units

TPB3S—helical,-stageplanetary gear units

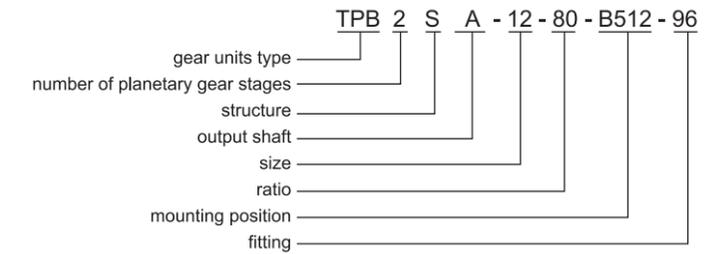
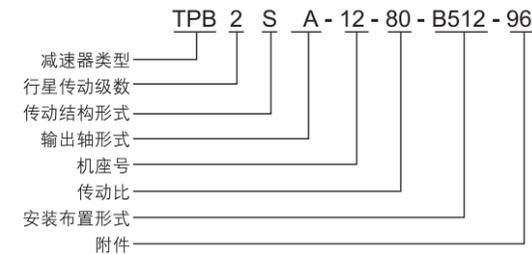
TPB3K—bevel-helical,3-stageplanetary gear units

**TPB系列行星减速器型号表示方法**

TPBseries planetary gear units type designations

**一、TPB系列行星减速器型号与标记**

Type designations of TPB series planetary gear units



型号说明	上例说明	explanation of type	Explanation of the above example
减速器类型: TPB系列行星减速器	TPB系列行星减速器	Gear units type: TPB series planetary gear units	TPB serie planetary gear units
行星传动级数: 2 二级传动 3三级传动	二级行星传动	Number of planetary gear stages: 2 Two stages 3 Three stages	Two planetary gear stages
传动结构形式: N 标准型 L 带直交轴传动 S 带平行轴传动 K 带直交轴、平行轴传动	带平行轴传动	Structure: N standard L bevel gear stage S helical gear stage K bevel-helical gear stage	Helical gear stage
输出轴形式: A 胀紧盘空心轴 B 渐开线花键空心轴 C 平键实心轴 D 渐开线花键实心轴	胀紧盘空心轴输出	Output shaft: A hollow shaft with shrink disk B hollow shaft with involute splines C solid shaft with parallel key D solid shatt with involute splines	Hollow shaft with shrink disk
机座号: 9~36 (见选型表)	12号机座号	Size: 9~36(See selection table)	Size 12
传动比: (见选型表) (实际传动比见25~27页)	公称传动比 $i_n=80$	Ratio: (See selection table) (For the actual ratio see pages 25~27)	Nominal ratio $i_n=80$
安装布置形式: B500~B556 水平 V100~V130 立式(低速轴向下) V300~V330立式(低速轴向上) 见39页	安装布置形式为B512 水平安装输入轴在右边	Mounting position: B500~b556 horizontal V100~V130 vertical(output shaft is downward) V300~V330 vertical(output shaft is upward) See page 39	Mounting position B512 horizontal, input shaft at the right side
带直交轴传动输入轴旋转方向代号(面对输入轴方向看): CW顺时针 CCW逆时针 其他省略	平行轴传动省略	Direction code of rotation of input Shaft for bevel gear stage(viewing on input shaft) CW clockwise CCW counter clokwise The others can be omitted	Helical gear stage omitted
附件 99 无附件 96 减速器底座 70 电机钟形支座(输入) 71 电机托架 72 电机支架 73 摆动底座 74 钟形支座(输出) 75 扭矩支撑臂(一侧) 76 扭矩支撑臂(二侧) 77 扭力轴支撑 见40页	带减速器底座	Add-on pieces: 99 Without add-on piece 96 Gear housing base 70 Motor bell housing(input) 71 Motor bracket 72 Motor bracket 73 Motor swing-base 74 Bell-housing(output) 75 Torque reacion arm(on one sides) 76 Torque reaction arm(on both sides) 77 Torsion shaft support See page 40	Add-on the gear housing base

## TPB系列行星减速器要求和说明 TPB series planetary gear units Requirement and specification

★ 为选择合适的TXP系列行星减速器请按样本中的详细说明进行。

★ 提供行星减速器可以直接安装。但不提供润滑油。

★ 给出的加油量只作为参考值，实际加油量应以油标的标记为准。

★ 减速器若未注明要求时一般为浸油润滑，若需要采用强制润滑请联系我们。

★ 对于B521、B531安装形式的全部规格和B511安装形式。

★ 对于V100/300、V110/V310、V120/V320、V130/V330安装形式的减速器，为了确保润滑，必须相应提高油位，需加装补偿油箱。补偿油箱可装在减速器上也可装在用户主机上确定该项时请联系我们。

★使用环境温度低于0℃时润滑油应预热到0℃以上。环境温度高于40℃以上时应采取隔热和冷却措施。使用场地应避免恶劣的环境比如：盐水、含盐的空气、刺激性物质、灰尘、泥、落石或飞石、过重的压力、强烈振动和冲击载荷等。

★胀紧盘空心输出轴减速器按标准提供胀紧盘，但不提供防护装置。为防止发生事故，所有旋转部位应按安全规定加罩防护。

★基础螺栓的最低性能等级为8.8级，有水平垫板并进行防腐处理。

★样本中的附图只属范例，并不要求严格一致，所注尺寸可能有所变动。有关参数可能改进。

★所注重量仅为平均值，不要求严格一致。

有关符号说明如下：



★ For selection of suitable TXP series planetary gear units please observe the details given in this brochure

★ The gear units supplied can be mounted directly. but the oil is not supplied.

★ Oil quantities given are guiding values only, the exact quantity of oil depends on the marks on the oil dipstick.

★ The gear units are supplied with dip lubrication without requirement, if required forced lubrication please contact us.

★ For all types of B521、B351and above size 21 of B511,a motor pump is required for lubrication of the input bearing.

★ For V100/300、V110/V310、V120/V320、V130/V330,the oil level must be heightenal for ensure lubricant supply, it should mount a oil compensating tank. The oil compensating tank can be mounted on the gear units or the user driven machine, please refer to us for choice.

★ Where ambient temperatures are lower than 0℃,the oil must be pre-heated above 0℃.where ambient temperatures are higher than 40℃,the heat insulation and cooling should be considered. Environmental conditions such as salt water, salt-laden air, aggressive substances, dust, mud, falling or flying stones, excessive pressure, heavy vibrations and extreme shock loads must be disclosed.

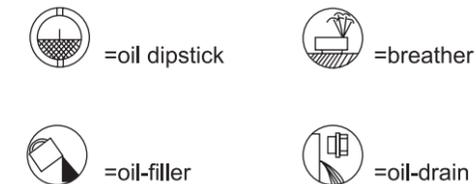
★ Shrink disk is supplied for the gear units of hollow output shaft for shrink disk, but not supply the guard. To prevent accidents, all rotating parts should be guarded according to safety regulations.

★ Foundation bolts of min. property is class 8.8, it has leveling pads and treated with anti-corrosion.

★ The attached picture is only example, not strictly binding, the noted dimension may be changed. Some parameters referring to may be improved.

★ The noted weights are only mean values, not strictly binding.

The signs specification is as following:



## TPB系列行星减速器选型指南 TPB series planetary gear units guidelines for the selection

减速器的承载能力受机械强度和热平衡许用功率两方面的限制，选用减速器时必须通过这两项功率核算。

1) 计算传动比

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

式中： $i_s$ -要求的传动比

$n_1$ -输入转速(r/min)

$n_2$ -输出转速(r/min)

2)确定减速器的额定功率，应满足：

$$P_N \geq P_2 \times f_1 \times f_2 \times f_3 \times f_4$$

式中：

$P_N$ -减速器额定功率（见额定功率表）

$P_2$ -载荷功率（即工作机所需功率）

$f_1$ -工作机系数（见表1）

$f_2$ -原动机系数（见表2）

$f_3$ -减速器安全系数（见表3）

$f_4$ -启动系数（见表4）

3) 校核最大扭矩，如峰值工作扭矩，起动扭矩或制动扭矩应满足要求：

$$P_N \geq \frac{T_A \times n_1}{9550} \times f_5$$

式中：

$T_A$ -输入轴最大扭矩，如峰值工作扭矩、起动扭矩、制动扭矩(N.m)

$f_5$ -峰值扭矩系数（见表5）

4) 检查输出轴上是否允许有附加载荷，许用附加径向力见30~31页。

5) 检查实际传动比*i*是否满足要求，实际传动比*i*见25~27页。

6) 校核热平衡功率

减速器不带辅助冷却装置，应满足：

$$P_2 \leq P_G = P_{G1} \times f_6 \times f_7$$

式中：

$P_G$ -减速器热功率

$P_{G1}$ -无辅助冷却装置时的热功率（见热功率表）

$F_6$ -环境温度系数（见表6）

$F_7$ -功率利用率系数（见表15）

The loading capacity of gear units is restricted by the permissible powers of mechanical tension and the thermal balance, it should meet the following powers in selecting:

1)calculate the transmission ratio:

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

$i_s$ -the required transmission ratio

$n_1$ -the input speed(r/min)

$n_2$ - the output speed(r/min)

2)determine the nominal power ratings of gear units:

$$P_N \geq P_2 \times f_1 \times f_2 \times f_3 \times f_4$$

$P_N$ -the nominal power ratings of gear units (see nominal power ratings table)

$P_2$ -loading power(the required power of driven machine)

$f_1$ -factor for driven machine(see table1)

$f_2$ - factor for prime mover(see table2)

$f_3$ -safety factor for gear units(see table3)

$f_4$ - starting factor(see table4)

3)check the max. torque, the peak operating-, starting-or braking torque should meet the following requirement:

$$P_N \geq \frac{T_A \times n_1}{9550} \times f_5$$

$T_A$ -the max. torque of input shaft, such as peak operating-,starting-or braking torque(N.m)

$f_5$ -peak torque factor(see table 5)

4)check whether it permits the additional force of output shaft,for the permissible additional radial force see pages 30~31.

5)check whether the actual transmission ratio meets the requirement, the actual transmission ratio see pages 25~27

6)check the power of thermal balance

a. the gear units without auxiliary cooling, should meet:

$$P_2 \leq P_G = P_{G1} \times f_6 \times f_7$$

$P_G$ -the thermal capacities of gear units

$P_{G1}$ -the thermal capacities without auxiliary cooling(see thermal capacities table)

$F_6$ -factor for ambient temperature (see table 6)

$F_7$ -utilization factor(see table 7)

TPB系列行星减速器选型指南

TPB series planetary gear units guidelines for the selection

例：胶带输送机用行星齿轮减速器

电机功率 P<sub>1</sub>=75kW  
电机转速 n<sub>1</sub>=1500r/min  
最大起动转矩 T<sub>A</sub>=950Nm  
输送机转矩 T<sub>2</sub>=10500Nm  
输送机转速 n<sub>2</sub>=6.6r/min

每日工作12小时

每小时起动次数8次

每小时工作周期ED=60%

工作环境温度30℃

安装在大车间使用，水平布置，要求减速器胀紧盘空

心输出轴带底座

(1) 计算传动比:

$$i_s = \frac{n_1}{n_2} = \frac{1500}{6.6} = 227.27$$

则选减速器类型为: TP3N i<sub>N</sub>=225

(2) 确定减速器规格

输送机功率:

$$P_2 = \frac{T_2 \times n_2}{9550} = \frac{10500 \times 6.6}{9550} = 72.57 \text{ kW}$$

额定功率应为:

$$P_N \geq P_2 \times f_1 \times f_2 \times f_3 \times f_4 = 72.57 \times 1.3 \times 1 \times 1.3 \times 1 = 122.64 \text{ kW}$$

确定规格为17号P<sub>N</sub>=142kW > 122.64kW

(3) 校核热功率

功率利用系数:

则功率利用系数: f<sub>15</sub>=0.83

减速器不带辅助冷却装置时:

$$P_2 = 72.57 \text{ kW} < P_G = P_{G1} \times f_6 \times f_{15} = 91 \times 1 \times 0.83 = 75.53 \text{ kW}$$

满足要求

选用的减速器应为:

TPB3N-A-17-225-B500-96

Example planetary gear units used for glue feeding machine

Motor power rating P<sub>1</sub>=75kW  
Motor speed n<sub>1</sub>=1500r/min  
Max. starting torque T<sub>A</sub>=950Nm  
Torque for feeding machine T<sub>2</sub>=10500Nm  
Speed for feeding machine n<sub>2</sub>=6.6r/min

Operating 12 hours per day

Starting 8 times per hour

Operating cycle per hour ED=60%

Ambient temperature 30℃

Installation in a large hall, horizontal, hollow output shaft for shrink disk, add-on housing base required

(1) calculate the transmission ratio:

$$i_s = \frac{n_1}{n_2} = \frac{1500}{6.6} = 227.27$$

select gear unit type: TP3N i<sub>N</sub>=225

(2) determine the gear units size

power rating for feeding machine:

$$P_2 = \frac{T_2 \times n_2}{9550} = \frac{10500 \times 6.6}{9550} = 72.57 \text{ kW}$$

Nom. power rating should be:

$$P_N \geq P_2 \times f_1 \times f_2 \times f_3 \times f_4 = 72.57 \times 1.3 \times 1 \times 1.3 \times 1 = 122.64 \text{ kW}$$

determine size 17 P<sub>N</sub>=142kW > 122.64kW

(3) checking the thermal capacities

the utilization factor: f<sub>15</sub>=0.83

when the gear unit without auxiliary cooling:

$$P_2 = 72.57 \text{ kW} < P_G = P_{G1} \times f_6 \times f_{15} = 91 \times 1 \times 0.83 = 75.53 \text{ kW}$$

it meets the requirement.

The gear units selected is:

TPB3N-A-17-225-B500-96

TPB系列行星减速器服务系数

表1	工作机系数						f1		
	工作机	日工作小时数			工作机	日工作小时数			
		≤ 0.5h	0.5-10h	> 10h		≤ 0.5h		0.5-10h	> 10h
污 水 处 理	浓缩器 (中心传动)	-	-	1.2	金属 加工 设备	可逆式板坯轧机	-	2.5	2.5
	压滤器	1.0	1.3	1.5		可逆式线材轧机	-	1.8	1.8
	絮凝器	0.8	1.0	1.3		可逆式薄板轧机	-	2.0	2.0
	曝气机	-	1.8	2.0		可逆式中厚板轧机	-	1.8	1.8
	捞集设备	1.0	1.2	1.3		辊缝调节驱动装置	0.9	1.0	-
	纵向、回转组合捞集装置	1.0	1.3	1.5		斗式输送机	-	1.2	1.5
	预浓缩器	-	1.1	1.3		绞车	1.4	1.6	1.6
	螺杆泵	-	1.3	1.5		卷扬机	-	1.5	1.8
	水轮机	-	-	2.0		皮带输送机 < 150kW	1.0	1.2	1.3
	离心泵	1.0	1.2	1.3		皮带输送机 ≥ 150kW	1.1	.3	1.5
挖 泥 机	1个活塞容积式泵	1.3	1.4	1.8	输 送 机 械	货用电梯*	-	1.2	1.5
	>1个活塞容积式泵	1.2	1.4	1.5		客用电梯*	-	1.5	1.8
	斗式运输机	-	1.6	1.6		刮板式输送机	-	1.2	1.5
	倾卸装置	-	1.3	1.5		自动扶梯	-	1.2	1.4
	carteypillar行走机构	1.2	1.6	1.8		轨道行走机构	-	1.5	-
	斗轮式挖掘机 (用于捡拾)	-	1.7	1.7		变频装置	-	1.8	2.0
	斗轮式挖掘机 (用于粗料)	-	2.2	2.2		往复式压缩机	-	1.8	1.9
	切碎机	-	2.2	2.2		回转机构	2.5	2.5	3.0
	行走机构*	-	1.4	1.8		俯仰机构	2.5	2.5	3.0
	弯板机*	-	1.0	1.0		行走机构	2.5	3.0	3.0
化 学 工 业	挤压机	-	-	1.6	起 重 机 械	提升机构	2.5	2.5	3.0
	调浆机	-	1.8	1.8		转臂式起重机	2.5	2.5	3.0
	橡胶研光机	-	1.5	1.5		冷却塔	-	-	2.0
	冷却圆筒	-	1.3	1.4		冷却塔风扇	-	-	2.0
	混料机, 用于均匀介质	1.0	1.3	1.4		风机 (轴流和离心式)	-	1.4	1.5
	混料机, 用于非均匀介质	1.4	1.6	1.7		蔗糖生产	-	-	1.7
	搅拌机, 用于密度均匀介质	1.0	1.3	1.5		甘蔗切碎机*	-	-	1.7
	搅拌机, 用于非均匀介质	1.2	1.4	1.6		甘蔗碾磨机	-	-	1.2
	搅拌机, 用于不均匀气体吸收	1.4	1.6	1.8		甜菜绞碎机	-	-	1.2
	烘干机	1.0	1.3	1.5		榨取机、接写致冷机、蒸煮机	-	-	1.4
金 属 加 工 设 备	离心机	1.0	1.2	1.3	甜 菜 糖 生 产	甜菜清洗机	-	-	1.5
	翻板机	1.0	1.0	1.2		甜菜切碎机	-	-	1.5
	推钢机	1.0	1.2	1.2		各种类型**	-	1.8	2.0
	绕线机	-	1.6	1.6		碎浆机驱动装置	2.0	2.0	2.0
	冷床横移架	-	1.5	1.5		离心式压缩机	-	1.4	1.5
	辊式矫直机	-	1.6	1.6		运货索道	-	1.3	1.4
	辊道 (连续式)	-	1.5	1.5		往返系统空中索道	-	1.6	1.8
	辊道 (间歇式)	-	2.0	2.0		T型杆升降机	-	1.3	1.4
	可逆式轧管机	-	1.8	1.8		连续索道	-	1.4	1.6
	剪切机 (连续式)	-	1.5	1.5		混凝土搅拌机	-	1.5	1.5
剪切机 (曲柄式)	1.0	1.0	1.0	破碎机*	-	1.2	1.4		
连铸机驱动装置	-	1.4	1.4	回转窑	-	-	2.0		
可逆式开坯机	-	2.5	2.5	管式磨机	-	-	2.0		
				水泥工业	选粉机	-	1.6	1.6	
					辊压机	-	-	2.0	

工作机额定功率P2的确定

\*) 按最大扭矩确定额定功率

\*\* ) 检验热功率是绝对必要的

TPB series planetary gear units service factor

Table 1		factor driven machine							f1
		Driven machines			Driven machines				
		Effective daily operating Period under load in hours			Effective daily operating Period under load in hours				
		≤ 0.5h	0.5-10h	> 10h			≤ 0.5h	0.5-10h	> 10h
Waste water treatment	Thickeners(central drive)	-	-	1.2	Metal working mills	Reversing slabbing mills	-	2.5	2.5
	Filter presses	1.0	1.3	1.5		Reversing wire mills	-	1.8	1.8
	Flocculation apparata	0.8	1.0	1.3		Reversing sheet mills	-	2.0	2.0
	Aerators	-	1.8	2.0		Reversing plate mills	-	1.8	1.8
	Raking equipment	1.0	1.2	1.3		Roll adjustment drives	0.9	1.0	-
	Combined longitudinal and rotary rakes	1.0	1.3	1.5		Bucket conveyors	-	1.2	1.5
	Pre-thickeners	-	1.1	1.3		Hauling winches	1.4	1.6	1.6
	Screw pumps	-	1.3	.5		Hoists	-	1.5	1.8
	Water turbines	-	-	2.0		Belt conveyors < 150kw	1.0	1.2	1.3
	Centrifugal pumps	1.0	1.2	1.3		Belt conveyors ≥ 150kw	1.1	.3	1.5
Dredgers	1 Piston positive-displacement pumps	1.3	1.4	1.8	Convey-ors	Goods lifts*	-	1.2	1.5
	> 1Piston positive-displacement pumps	1.2	1.4	1.5		Passenger lifts*	-	1.5	1.8
	Bucket conveyors	-	1.6	1.6		Apron converters	-	1.2	1.5
	Dumping devices	-	1.3	1.5		Escalators	-	1.2	1.4
	Carterpillar traveling gears	1.2	1.6	1.8		Rail travelling gears	-	1.5	-
	Bucket wheel excavators as pick-up	-	1.7	1.7		Frequency converters	-	1.8	2.0
	Bucket wheel excavators for primitive material	-	2.2	2.2		Reciprocating compressors	-	1.8	1.9
	cutter heads	-	2.2	2.2		Slewing gears	2.5	2.5	3.0
	traversing gears*	-	1.4	1.8		Luffing gears	2.5	2.5	3.0
	plate bending machines	-	1.0	1.0		Travelling gears	2.5	3.0	3.0
Chemical industry	extruders	-	-	1.6	Cranes	Hoisting gears	2.5	2.5	3.0
	dough mills	-	1.8	1.8		Derricking jib cranes	2.5	2.5	3.0
	rubber calenders	-	1.5	1.5		Cooling Towers	-	-	2.0
	cooling drums	-	1.3	1.4		Blowers(axial and radial)	-	1.4	1.5
	mixers for uniform media	1.0	1.3	1.4		Cane sugar production	-	-	1.7
	mixers for non-uniform media	1.4	1.6	1.7		Cane mills	-	-	1.7
	agitators for media with uniform density	1.0	1.3	1.5		Beet sugar production	-	-	1.2
	agitators for media with non-uniform density	1.2	1.4	1.6		Extraction plants,mechanical refrigerators,juice boilers,	-	-	1.4
	agitators for media with non-uniform gas absorption	1.4	1.6	1.8		Sugar beet washing machines	-	-	1.5
	toasters	1.0	1.3	1.5		Sugar beet cutters	-	-	1.5
Metal working mills	centrifuges	1.0	1.2	1.3	Paper machines	Of all-kind	-	1.8	2.0
	plate tilters	1.0	1.0	1.2		Pulper drives	2.0	2.0	2.0
	ingot pushers	1.0	1.2	1.2		Centrifugal compressors	-	1.4	1.5
	winding machines	-	1.6	1.6		Material ropeways	-	1.3	1.4
	cooling bed transfer frames	-	1.5	1.5		To-and fro system aerial ropeways	-	1.6	1.8
	roller straighteners	-	1.6	1.6		T-bar lifts	-	1.3	1.4
	roller tables contiuous	-	1.5	1.5		Continuous ropeways	-	1.4	1.6
	roller tables intermittent	-	2.0	2.0		Concrete mixers	-	1.5	1.5
	roller tables reversing tube mills	-	1.8	1.8		Breakers*	-	1.2	1.4
	shears continuous*	-	1.5	1.5		Rotary kilns	-	-	2.0
Metal working mills	shears crank type*	1.0	1.0	1.0	Cement industry	Tube mills	-	-	2.0
	continuous casting drivers	-	1.4	1.4		Separators	-	1.6	1.6
	reversing blooming mills	-	2.5	2.5		Roll crushers	-	-	2.0

Design for power rating of driven machine P2  
 \*)Designed power corresponding to max. torque.  
 \*\*)A check for thermal capacity is absolutely essential.

TPB系列行星减速器服务系数  
 TPB Series Planetary Gear Units Service Factor

表2 原动机系数 f2	
电机、液压马达、汽轮机	1.0
4-6缸活塞发动机	1.25
1-3缸活塞发动机	1.5

Table2 Factor Prime Mover f2	
Electric motors, hydraulic motors, turbines	1.0
Piston engines4-6cylinders	1.25
Piston engines1-3cylinders	1.5

表3 减速器安全系数 f3			
重要性 与安全 要求	一般设备, 减速器 失效仅引起单机停 产且易更换备件	重要设备, 减速器 失效引起机组、生 产线或全厂停产	高度安全要求, 减 速器失效引起设 备、人身事故
f3	1.3-1.7	1.5-2.0	1.7-2.5

Table3 Safety Factor f3			
Importance and safety request	Ordinary equipment, malfunction only cause accident of single-machine and easily replaced.	Important equipment, malfunction only cause the accident of assembling unit, production-line or whole factor	Safety request highly, malfunction only cause the accident of equipment and personal injury.
f3	1.3-1.7	1.5-2.0	1.7-2.5

表4 启动系数 f4					
f4	f1xf2xf3	1	1.25	2-	> 3
每小时启动次数			-1.75	2.75	
≤ 5	1	1	1	1	1
6-25	1.2	1.12	1.06	1	1
26-60	1.3	1.2	1.12	1.06	1.06
61-180	1.5	1.3	1.2	1.12	1.12
> 180	1.7	1.5	1.3	1.2	1.2

Table4 Start Factor f4					
f4	f1xf2xf3	1	1.25	2-	> 3
Starts per hour			-1.75	2.75	
≤ 5	1	1	1	1	1
6-25	1.2	1.12	1.06	1	1
26-60	1.3	1.2	1.12	1.06	1.06
61-180	1.5	1.3	1.2	1.12	1.12
> 180	1.7	1.5	1.3	1.2	1.2

表5 峰值扭矩系数 f5				
	每小时峰值负荷次数			
	1-5	6-30	31-100	100
单向载荷	0.5	0.65	0.7	0.85
交变载荷	0.7	0.95	1.10	1.25

Table5 Peak Torque Factor f5				
	Load peak per hour			
	1-5	6-30	31-100	100
Steady direction of load	0.5	0.65	0.7	0.85
Alternating direction of load	0.7	0.95	1.10	1.25

表6 环境温度系数 f6					
环境温度	不带辅助冷却装置或仅带冷却风扇 每小时工作周期(ED)百分比%				
	100	80	60	40	20
10℃	1.14	1.20	1.32	1.54	2.04
20℃	1.00	1.0	1.16	1.35	1.79
30℃	0.87	0.93	1.00	1.18	1.56
40℃	0.71	0.75	0.82	0.96	1.27
50℃	0.55	0.58	0.64	0.74	0.98

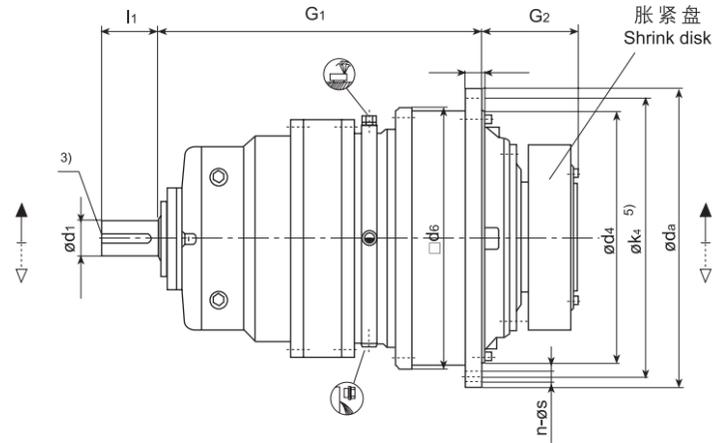
Table6 Thermal Factor f6					
Ambient temperature	Without auxiliary cooling or with fan cooling Operating cycle per hour(ED)in %				
	100	80	60	40	20
10℃	1.14	1.20	1.32	1.54	2.04
20℃	1.00	1.0	1.16	1.35	1.79
30℃	0.87	0.93	1.00	1.18	1.56
40℃	0.71	0.75	0.82	0.96	1.27
50℃	0.55	0.58	0.64	0.74	0.98

表7 功率利用率系数 f15							
30%	40%	50%	60%	70%	80%	90%	100%
0.66	0.77	0.83	0.90	0.90	0.95	1.0	1.0

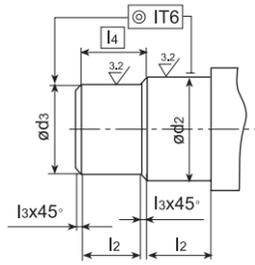
Table7 Utilization Factor f15							
30%	40%	50%	60%	70%	80%	90%	100%
0.66	0.77	0.83	0.90	0.90	0.95	1.0	1.0

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2NA  
规格(sizes) 9..36



工作机连接轴  
Shaft end of driven machine



传动比: iN=25...40  
Ratio: iN=25...40

TPB2NA 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension		工作机连接轴 Shaft end of driven machine												法兰孔 Flange bolts 孔径 Dia- meter s	数量 Qty. n	重量 Weight (kg)	油量 Oil quantity (l)	
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup>	d <sub>3</sub> <sup>4)</sup>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	c	d <sub>a</sub>	d <sub>4</sub> h <sub>7</sub>	d <sub>6</sub>	G <sub>1</sub>	G <sub>2</sub>	k					z
9	22000	55	90	120	115	65	2.5	67.5	24	428	350	356	469	165	388	6 ±1.5	18	24	240	6
10	31000	55	90	130	125	70	2.5	72.5	28	472	394	400	489	174	436	8 ±1.5	18	28	290	8
11	42000	70	120	140	135	82.5	2.5	85.0	32	525	425	436	579	204	485	8 ±1.5	22	20	350	12
12	60000	70	120	160	155	90	2.5	92.5	34	605	495	510	593	224	555	9 ±1.5	26	20	490	16
13	83000	80	140	180	175	95	2.5	97.5	39	645	535	554	714	241	595	11 ±1.5	26	24	590	20
14	117000	80	140	210	205	105	2.5	107.5	42	720	610	629	737	278	665	9	26	32	820	32
16	160000	95	160	230	225	110	2.5	112.5	44	770	660	680	851	285	715	10	26	36	1030	40
17	202000	95	160	250	245	120	2.5	122.5	50	895	750	775	877	294	830	10	33	24	1500	56
18	244000	110	180	260	255	120	2.5	122.5	50	930	785	815	1006	303	865	10	33	32	1900	66
19	295000	110	180	280	275	135	2.5	137.5	56	980	840	870	1029.5	327.5	915	12	33	36	2000	82
20	354000	110	180	300	295	135	2.5	137.5	56	980	840	870	1029.5	327.5	915	12	33	36	2100	75
21	392000	120	210	310	305	152	2.5	154.5	62	1115	935	960	1046	354	1025	24	39	32	2650	110
22	450000	120	210	330	325	152	2.5	154.5	62	1115	935	960	1046	354	1025	24	39	32	2800	95
23	513000	130	210	350	345	164	2.5	166.5	68	1210	1025	1056	1150	380	1120	28	39	36	3450	150
24	592000	130	210	360	355	164	2.5	166.5	68	1210	1025	1056	1150	380	1120	28	39	36	3900	125
25	684000	140	240	380	375	180	2.5	182.5	74	1320	1115	1150	1241	407	1220	29	45	36	4750	190
26	763000	140	240	400	395	180	2.5	182.5	74	1320	1115	1150	1241	407	1220	29	45	36	5150	160
27	852000	150	240	430	425	191	2.5	193.5	81	1460	1215	1248	1379	453	1345	31	52	32	6100	245
28	950000	150	240	450	445	191	2.5	193.5	81	1460	1215	1248	1379	453	1345	31	52	32	6550	205
29	1060000	160	270	460	450	197.5	5	202.5	87	1565	1320	1355	1457	483	1450	34	52	36	7800	305
30	1200000	160	270	480	470	197.5	5	202.5	87	1565	1320	1355	1457	483	1450	34	52	36	8300	255
31	1330000	170	270	480	470	232	5	237.0	94	1665	1400	1443	1607	538	1545	36	62	32	10200	380
32	1500000	170	270	510	500	232	5	237.0	94	1665	1400	1443	1607	538	1545	36	62	32	10700	315
33	1680000	180	310	530	520	242	5	247.0	100	1755	1495	1536	1683	573	1635	36	62	36	1235	460
34	1920000	180	310	570	560	242	5	247.0	100	1755	1495	1536	1683	573	1635	36	62	36	13150	380
35	2240000	190	310	600	590	272	5	277.0	112	1945	1685	1720	1899	656	1825	40	62	40	17300	645
36	2600000	190	310	640	630	272	5	277.0	112	1945	1685	1720	1899	656	1825	40	62	40	18400	535

1)当d<sub>1</sub> < 100时公差为m6,当d<sub>1</sub> > 100时公差为n6  
2)不含胀紧盘与润滑油的重量  
3)有关平键(符合GB/T1096-2003)与中心孔请参24页  
4)当尺寸 < 160时公差为h6  
5)孔的分布类型见23页

1)shaft diameter d<sub>1</sub> < 100,tolerance m6;shaft diameter d<sub>1</sub> > 100, tolerance n6  
2)Weight without shrink disk and oil  
3)For parallel key(GB/T1096-2003)and centre hole see page 24  
4) < 160h6  
5)For hole pattern,see page 23

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2N..  
规格(sizes) 9..36

		额定功率 P <sub>N</sub> Nominal power ratings (kW)																												
iN	n <sub>1</sub> r/min	n <sub>2</sub>	规格 Sizes																											
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
25	1500	60	137	193	261	373	516	728	995	1256	1517	1834	2201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	40	91	129	174	249	344	485	663	837	1012	1223	1468	1625	1866	2127	2454	2863	3163	3532	3938	4394	4975	5514	6218	6965	7960	9286	10779	
	750	30	68	96	131	187	258	364	497	628	759	917	1101	1219	1399	1595	1841	2127	2372	2649	2954	3296	3731	4135	4664	5223	5970	6965	8084	
28	1500	54	123	173	235	336	465	655	895	1131	1366	1651	1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1000	36	82	116	157	224	310	437	597	754	910	1101	1321	1463	1679	1914	2209	2552	2847	3179	3544	3955	4477	4962	5597	6268	7164	8358	9701	
	750	27	62	87	118	168	232	327	448	565	683	825	991	1097	1259	1436	1657	1914	2135	2384	2658	2966	3358	3722	4197	4701	5373	6268	7276	
31.5	1500	48	109	154	209	298	413	582	796	1005	1214	1468	1761	1950	2239	2552	2945	3403	3796	4238	4726	5273	5970	6616	7462	8358	9551	11143	12934	
	1000	32	73	103	139	199	275	388	531	670	809	978	1174	1300	1492	1701	1963	2268	2530	2826	3151	3515	3980	4411	4975	5572	6368	7429	8623	
	750	24	55	77	104	149	206	291	398	502	607	734	881	975	1119	1276	1473	1701	1898	2129	2363	2637	2985	3308	3731	4179	4776	5572	6467	
35.5	1500	42	96	135	183	261	361	509	696	879	1062	1284	1541	1706	1959	2233	2577	2977	3321	3709	4135	4614	5223	5789	6529	7313	8358	9750	11317	
	1000	28	64	90	122	174	241	340	464	586	708	856	1027	1138	1306	1489	1718	1985	2214	2472	2757	3076	3482	3860	4353	4875	5572	6500	7545	
	750	21	48	67	91	131	181	255	348	440	531	642	770	853	979	1117	1288	1489	1661	1854	2068	2307	2612	2895	3265	3656	4179	4875	5659	
40	1500	38	87	122	165	236	327	461	630	796	961	1162	1394	1544	1772	2020	2331	2694	3005	3355	3741	4175	4726	5238	5907	6616	7562	8822	10240	
	1000	25	57	80	109	155	215	303	415	523	632	764	917	1016	1166	1329	1534	1772	1977	2208	2461	2746	3109	3446	3886	4353	4975	5804	6737	
750	19	43	61	83	118	163	230	315	398	480	581	697	772	886	1010	1166	1347	1502	1678	1871	2087	2363	2619	2954	3308	3781	4411	5120		

		热功率 P <sub>G1</sub> Thermal capacities PG1																		(kW)	
安装类型 Settings		规格 Sizes																			
		9	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36		
狭小空间 Small confined spaces	1)	21	26	32	42	49	65	75	92	100	119	142	174	201	242	287	326	366	437		
室内大厅 Large halls, workshops	2)	29	37	45	60	69	92	106	130	147	169	201	246	285	343	406	462	519	619		
室外 In the open	3)	39	50	60	80	93	125	143	175	191	228	272	333	386	464	550	626	702	838		

\*)用于水平安装形式, 其它安装形式请与我们联系。

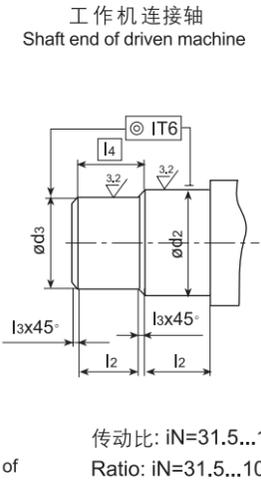
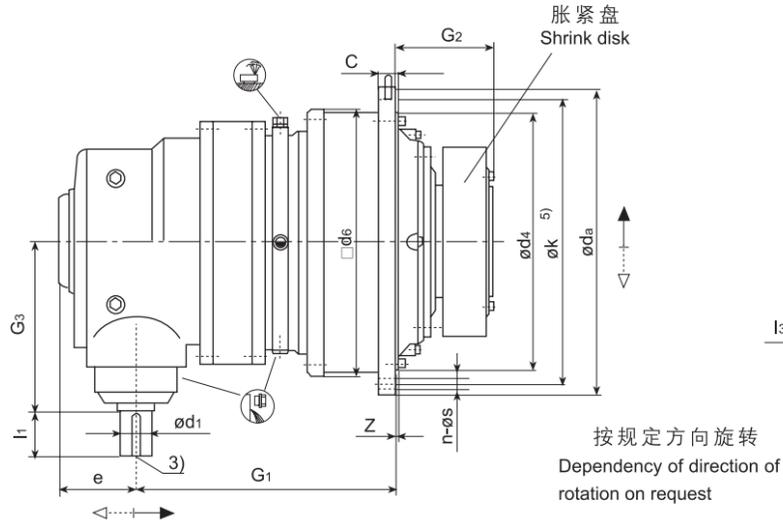
1)风速 > 0.5m/s  
2)风速 > 1.4m/s  
3)风速 > 3.7m/s

\*)Values apply to horizontal mounting position,for other mounting positions please refer to us

1)Wind velocity > 0.5m/s  
2)Wind velocity > 1.4m/s  
3)Wind velocity > 3.7m/s

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2LA..  
规格(sizes) 9..36



TPB2LA 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension				工作机连接轴 Shaft end of driven machine										法兰孔 Flange bolts		重量 Weight (kg)	油量 Oil quantity (l)					
		d <sub>1</sub> <sup>1)</sup> IN < 90	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup> IN > 100	I <sub>1</sub>	d <sub>2</sub> <sup>4)</sup> g6	d <sub>3</sub> <sup>4)</sup> g6	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	c	d <sub>4</sub> <sup>5)</sup> h7	d <sub>5</sub>	e	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>			k	z	孔径 Dia- meter S	数量 Qty. n	
9	22000	45	100	35	80	120	115	65	2.5	67.5	24	428	350	356	185	425	165	305	388	6 <sub>+1.5</sub>	18	24	260	6
10	31000	45	100	35	80	130	125	70	2.5	72.5	28	472	394	400	185	446	174	305	436	8 <sub>+1.5</sub>	18	28	310	8
11	42000	55	110	40	100	140	135	82.5	2.5	85.0	32	525	425	436	210	501	204	350	485	8 <sub>+1.5</sub>	22	20	380	12
12	60000	55	110	40	100	160	155	90	2.5	92.5	34	605	495	510	210	514	224	350	555	9 <sub>+1.5</sub>	26	20	520	16
13	83000	70	135	50	110	180	175	95	2.5	97.5	39	645	535	554	250	619	241	415	595	11 <sub>+1.5</sub>	26	24	650	20
14	117000	70	135	50	110	210	205	105	2.5	107.5	42	720	610	629	250	642	278	415	665	9	26	32	910	32
16	160000	80	165	60	140	230	225	110	2.5	112.5	44	770	660	680	295	705	285	490	715	10	26	36	1140	40
17	202000	80	165	60	140	250	245	120	2.5	122.5	50	895	750	775	295	731	294	490	830	10	33	24	1660	56
18	244000	90	165	70	140	260	255	120	2.5	122.5	50	930	785	815	350	882	303	605	865	10	33	32	2100	66
19	295000	90	165	70	140	280	275	135	2.5	137.5	56	980	840	870	350	905.5	327.5	605	915	12	33	36	2200	82
20	354000	90	165	70	140	300	295	135	2.5	137.5	56	980	840	870	350	905.5	327.5	605	915	12	33	36	2300	75
21	392000	110	205	80	170	310	305	152	2.5	154.5	62	1115	935	960	400	996	354	700	1025	24	39	32	2930	110
22	450000	110	205	80	170	330	325	152	2.5	154.5	62	1115	935	960	400	996	354	700	1025	24	39	32	3100	95
23	513000	110	205	80	170	350	345	164	2.5	166.5	68	1210	1025	1056	400	1055	380	700	1120	28	39	36	3800	150
24	592000	110	205	80	170	360	355	164	2.5	166.5	68	1210	1025	1056	400	1055	380	700	1120	28	39	36	4300	125
25	684000	130	245	100	210	380	375	180	2.5	182.5	74	1320	1115	1150	475	1138	407	835	1220	29	45	36	5250	190
26	763000	130	245	100	210	400	395	180	2.5	182.5	74	1320	1115	1150	475	1138	407	835	1220	29	45	36	5660	160
27	852000	130	245	100	210	430	425	191	2.5	193.5	81	1460	1215	1248	475	1272	453	835	1345	31	52	32	6680	245
28	950000	130	245	100	210	450	445	191	2.5	193.5	81	1460	1215	1248	475	1272	453	835	1345	31	52	32	7180	205
29	1060000	150	245	110	210	460	450	197.5	5	202.5	87	1565	1320	1355	530	1367	483	945	1450	34	52	36	8500	305
30	1200000	150	245	110	210	480	470	197.5	5	202.5	87	1565	1320	1355	530	1367	483	945	1450	34	52	36	9070	255
31~36																								根据用户要求供货 On request

1)当d<sub>1</sub> < 100时公差为m6,当d<sub>1</sub> > 100时公差为n6  
2)不含胀紧盘与润滑油的重量  
3)有关平键(符合GB/T1096-2003)与中心孔请参24页  
4)当尺寸 < 160时公差为h6  
5)孔的分布类型见23页

1)shaft diameter d<sub>1</sub> < 100, tolerance m6; shaft diameter d<sub>1</sub> > 100, tolerance n6  
2)Weight without shrink disk and oil  
3)For parallel key(GB/T1096-2003)and centre hole see page 24  
4) < 160h6  
5)For hole pattern, see page 23

## TPB系列行星减速器 TPB series planetary gear units

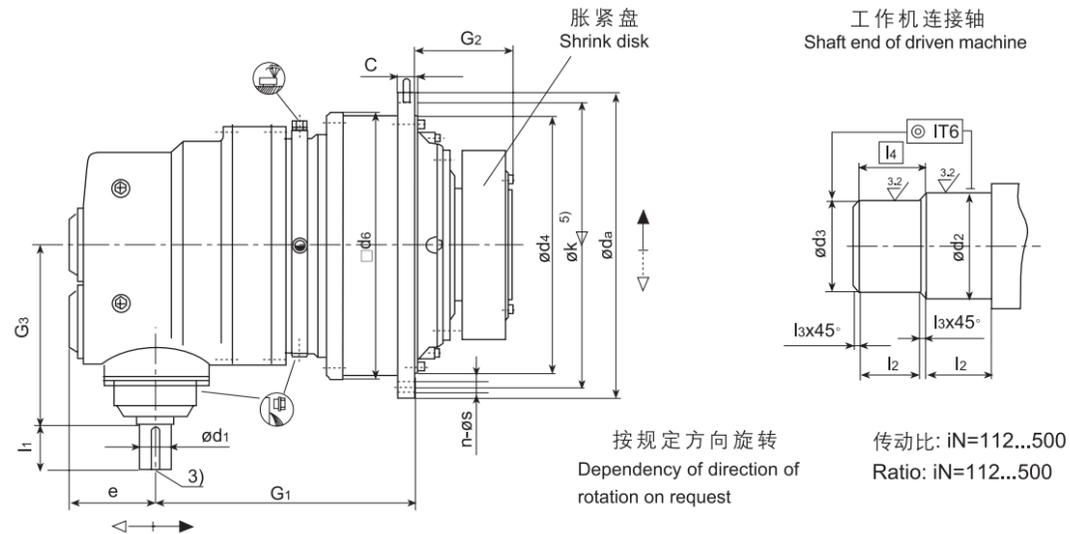
型号(Type) TPB2L..  
规格(sizes) 9..36

额定功率 PN Nominal power ratings (kW)																								
i <sub>N</sub>	n <sub>1</sub> r/min	n <sub>2</sub>	规格 Sizes																					
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31~36
31.5	1500	47.6	111	156	212	302	418	510	806	865	1230*	1487*	1517*	1976*	2268*									
	1000	31.7	74	104	141	202	279	340	538	577	820	991	1011	1317*	1512*	1724*	1989*	2298*	2564*	2863*	2937*			
	750	23.8	55	78	106	151	209	255	403	433	615	743	758	988	1134	1293	1492	1724	1923	2147	2203			
35.5	1500	42.3	98	139	188	268	345	487	716	858	1091*	1319*	1504*	1753*	2013*									
	1000	28.2	66	92	125	179	247	324	477	572	728	880	1003	1169*	1342*	1530*	1712*	2040*	2275*	2540*	2833*			
	750	21.1	49	69	94	134	173	243	358	429	546	660	752	877	1006	1147	1284	1530	1706	1905	2124			
40	1500	37.5	87	123	167	238	306	432	635	802	969*	1171*	1405*	1556*	1786*									
	1000	25.0	58	82	111	159	204	288	423	535	646	781	937	1037*	1191*	1358*	1567*	1810*	2019*	2255*	2514*			
	750	18.8	44	62	83	119	153	216	318	401	484	585	703	778	883	1018	1175	1358	1514	1691	1885			
45	1500	33.3	78	109	148	212	293	413	565	713	861*	1041*	1249*	1383*	1588*	1810*	2089*							
	1000	22.2	52	73	99	141	195	275	376	475	574	694	833	922*	1059*	1207*	1393*	1609*	1795*	2004*	2235			
	750	16.7	39	55	74	106	146	206	282	356	430	520	625	692	794	905	1044	1207	1346	1503	1676	1870	2117	
50	1500	30.3	70	98	133	191	264	372	508	641	775	937	1124	1245*	1429*	1629*	1880*							
	1000	20.0	47	66	89	127	176	248	339	428	517	625	749	830	953	1086	1253	1448*	1615*	1804*	2011*			
	750	15.0	35	49	67	95	132	186	254	321	387	468	562	622	714	815	940	1086	1211	1353	1508	1683	1905	
56	1500	26.8	62	88	119	170	235	332	454	573	692	836	1004	1111*	1276*	1455*	1678*							
	1000	17.9	42	59	79	113	157	221	302	382	461	558	669	741	851	970	1119	1293*	1442*	1610*	1796*	2004*	2268*	
	750	13.4	31	44	60	85	118	166	227	286	346	418	502	556	638	727	839	970	1082	1208	1347	1503	1701	
63	1500	23.8	55	78	106	151	209	295	403	509	615	743	892	988	1134	1293	1492	1724*	1923*	2147*	2394*			
	1000	15.9	37	52	71	101	139	197	269	339	410	496	595	659	756	862	995	1149	1282	1432	1593	1781*	2016*	
	750	11.9	28	39	53	76	105	147	202	255	307	372	446	494	567	646	746	862	961	1074	1197	1336	1512	
71	1500	21.1	49	69	94	134	186	262	358	452	546	660	792	877	1006	1147	1324	1530	1706	1905	2124			
	1000	14.1	33	46	63	89	124	174	239	301	364	440	528	584	671	765	883	1020	1138	1270	1416	1580*	1789*	
	750	10.6	25	35	47	67	93	131	179	226	273	330	396	438	503	574	662	765	853	953	1062	1185	1342	
80	1500	18.8	44	62	83	119	165	232	318	401	484	585	703	778	893	1018	1175	1358	1514	1691	1885			
	1000	12.5	29	41	56	79	110	155	212	267	323	390	468	519	595	679	783	905	1010	1127	1257	1403*	1588*	
	750	9.4	22	31	42	60	82	116	159	200	242	293	351	389	447	509	587	679	757	845	943	1052	1191	
90	1500	16.7	39	55	74	106	146	206	282	356	430	520	625	692	794	905	1044	1207	1346	1503	1676	1870	2117	
	1000	11.1	26	36	49	71	98	138	188	238	287	347	416	461	529	603	696	804	897	1002	1117	1247	1411	
	750	8.3	19	27	37	53	73	103	141	178	215	260	312	346	397	453	522	603	673	752	838	935	1059	
100	1500	15.0	35	49	67	95	132	186	254	321	387	468	562	622	714	815	940	1086	1211	1353	1508	1683	1905	
	1000	10.0	23	33	44	64	88	124	169	214	258	312	375	415	476	543	627	724	808	902	1006	1122	1270	
	750	7.5	17	25	33	48	66	93																



## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2KA..  
规格(sizes) 9..20



TPB2KA 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension			工作机连接轴 Shaft end of driven machine										法兰孔 Flange bolts 孔径 Dia- meter S	数量 Qty. n	重量 Weight (kg)	油量 Oil quantity (l)						
		d <sub>1</sub> <sup>1)</sup> (N < 360)	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup> (N > 400)	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup> g6	d <sub>3</sub> <sup>4)</sup> g6	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	c	d <sub>a</sub>	d <sub>4</sub> h <sub>7</sub>	d <sub>6</sub>					e	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	k	z
9	22000	30	70	25	60	120	115	65	2.5	67.5	24	428	350	356	122	420	165	320	388	6 ± 1.5	18	24	270	6
10	31000	30	70	25	60	130	125	70	2.5	72.5	28	472	394	400	122	441	174	320	436	8 ± 1.5	18	28	320	8
11	42000	35	80	28	60	140	135	82.5	2.5	85.0	32	525	425	436	137	456	204	375	485	8 ± 1.5	22	20	390	12
12	60000	35	80	28	60	160	155	90	2.5	92.5	34	605	495	510	137	470	224	375	555	9 ± 1.5	26	20	540	16
13	83000	45	100	35	80	180	175	95	2.5	97.5	39	645	535	554	172	560	241	445	595	11 ± 1.5	26	24	690	20
14	117000	45	100	35	80	210	205	105	2.5	107.5	42	720	610	629	172	587	278	445	665	9	26	32	950	32
16	160000	55	110	40	100	230	225	110	2.5	112.5	44	770	660	680	194	698	285	520	715	10	26	36	1200	40
17	202000	55	110	40	100	250	245	120	2.5	122.5	50	895	750	775	194	724	294	520	830	10	33	24	1700	56
18	244000	70	135	50	110	260	255	120	2.5	122.5	50	930	785	815	240	741.5	303	615	865	10	33	32	2010	73
19	295000	70	135	50	110	280	275	135	2.5	137.5	56	980	840	870	240	764.5	327.5	615	915	12	33	36	2470	82
20	354000	70	135	50	110	300	295	135	2.5	137.5	56	980	840	870	240	764.5	327.5	615	915	12	33	36	2550	75

21~26 根据用户要求供货 On request

- 1)当d<sub>1</sub> < 100时公差为m6,当d<sub>1</sub> > 100时公差为n6
- 2)不含胀紧盘与润滑油的重量
- 3)有关平键(符合GB/T1096-2003)与中心孔请参24页
- 4)当尺寸 < 160时公差为h6
- 5)孔的分布类型见23页

- 1)shaft diameter d<sub>1</sub> < 100,tolerance m6;shaft diameter d<sub>1</sub> > 100, tolerance n6
- 2)Weight without shrink disk and oil
- 3)For parallel key(GB/T1096-2003)and centre hole see page 24
- 4) < 160h6
- 5)For hole pattern,see page 23

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2K..  
规格(sizes) 9..20

额定功率 PN Nominal power ratings (kW)													
iN	n1 r/min	n2	规格 Sizes										
			9	10	11	12	13	14	16	17	18	19	20
112	1500	13.4	30.9	43.6	59.0	84	117	164	225	284	343	415	498
	1000	8.9	20.6	29.0	39.4	56	78	110	150	189	229	276	332
	750	6.7	15.5	21.8	29.5	42	58	82	112	142	171	207	249
125	1500	12.0	27.7	39.0	52.9	76	105	147	201	254	307	372	446
	1000	8.0	18.5	26.0	35.3	50	70	98	134	170	205	248	297
	750	6.0	13.9	19.5	26.4	38	52	74	101	127	154	186	223
140	1500	10.7	24.7	34.9	47.2	67	93	132	180	227	274	332	398
	1000	7.1	16.5	23.2	31.5	45	62	88	120	151	183	221	265
	750	5.4	12.4	17.4	23.6	34	47	66	90	114	137	166	199
160	1500	9.4	21.6	30.5	41.3	59	82	115	157	199	240	290	348
	1000	6.3	14.4	20.3	27.5	39	54	77	105	132	160	193	232
	750	4.7	10.8	15.3	20.7	30	41	58	79	99	120	145	174
180	1500	8.3	19.2	27.1	36.7	52	73	102	140	177	213	258	310
	1000	5.6	12.8	18.1	24.5	35	48	68	93	118	142	172	206
	750	4.2	9.6	13.6	18.4	26	36	51	70	88	107	129	155
200	1500	7.5	17.3	24.4	33.1	47	65	92	126	159	192	232	279
	1000	5.0	11.5	16.3	22.0	31	44	61	84	106	128	155	186
	750	3.8	8.7	12.2	16.5	24	33	46	63	79	96	116	139
225	1500	6.7	15.4	21.7	29.4	42	58	82	112	141	171	206	248
	1000	4.4	10.3	14.5	19.6	28	39	55	75	94	114	138	165
	750	3.3	7.7	10.8	14.7	21	29	41	56	71	85	103	124
250	1500	6.0	13.9	19.5	26.4	38	52	74	101	127	154	186	223
	1000	4.0	9.2	13.0	17.6	25	35	49	67	85	102	124	149
	750	3.0	6.9	9.8	13.2	19	26	37	50	64	77	93	111
280	1500	5.4	12.4	17.4	23.6	34	47	66	90	114	137	166	199
	1000	3.6	8.2	11.6	15.7	22	31	44	60	76	91	111	133
	750	2.7	6.2	8.7	11.8	17	23	33	45	57	69	83	100
320	1500	4.7	10.8	15.3	20.7	30	41	58	79	99	120	145	174
	1000	3.1	7.2	10.2	13.8	20	27	38	52	66	80	97	116
	750	2.3	5.4	7.6	10.3	15	20	29	39	50	60	73	87
360	1500	4.2	9.6	13.6	18.4	26	36	51	70	88	107	129	155
	1000	2.8	6.4	9.0	12.2	17	24	34	47	59	71	86	103
	750	2.1	4.8	6.8	9.2	13	18	26	35	44	53	64	77
400	1500	3.8	8.7	12.2	16.5	24	33	46	63	79	96	116	139
	1000	2.5	5.8	8.1	11.0	16	22	31	42	53	64	77	93
	750	1.9	4.3	6.1	8.3	12	16	23	31	40	48	58	70
450	1500	3.3	7.7	10.8	14.7	21	29	41	56	71	85	103	124
	1000	2.2	5.1	7.2	9.8	14	19	27	37	47	57	69	83
	750	1.7	3.8	5.4	7.3	10	15	20	28	35	43	52	62
500	1500	3.0	6.9	9.8	13.2	19	26	37	50	64	77	93	111
	1000	2.0	4.6	6.5	8.8	13	17	25	34	42	51	62	77
	750	1.5	3.5	4.9	6.6	9	13	18	25	32	38	46	56

560 根据用户要求供货 On request

安装类型 Settings	热功率 P <sub>e1</sub> *) Thermal capacities P <sub>e1</sub> *) (kW)									
	规格 Sizes									
	9	10	11	12	13	14	16	17	18	19/20
狭小空间 1) Small confined spaces	12	15	18	24	28	38	44	53	58	69
室内大厅 2) Large halls, workshops	17	22	26	35	40	54	62	76	82	98
室外 3) In the open	23	29	35	47	54	73	83	102	111	133

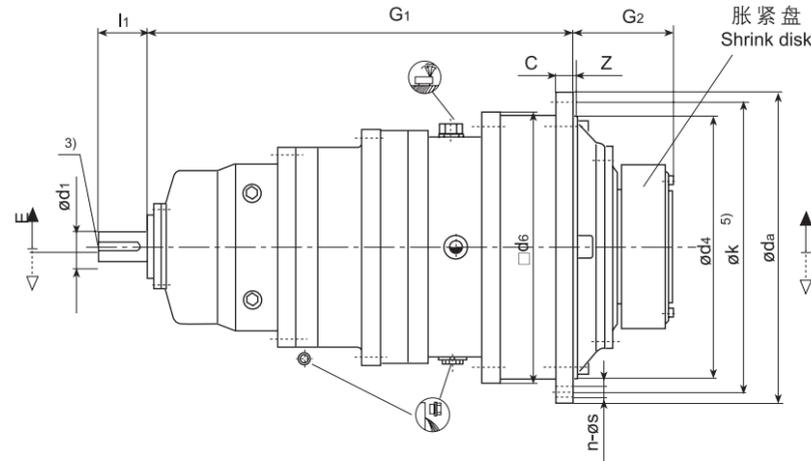
\*)用于水平安装形式, 其它安装形式请与我们联系。\*)Values apply to horizontal mounting position,for other mounting positions please refer to us

- 1)风速 > 0.5m/s
- 2)风速 > 1.4m/s
- 3)风速 > 3.7m/s

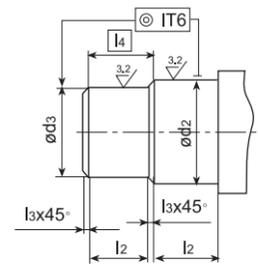
- 1)Wind velocity > 0.5m/s
- 2)Wind velocity > 1.4m/s
- 3)Wind velocity > 3.7m/s

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB2NA..  
规格(sizes) 9..36



工作机连接轴  
Shaft end of driven machine



传动比: iN=140...280  
Ratio: iN=140...280

TPB3NA 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension		工作机连接轴 Shaft end of driven machine													法兰孔 Flange bolts	重量 Weight (kg)	油量 Oil quantity (l)	
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup>	d <sub>3</sub> <sup>4)</sup>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	c	d <sub>a</sub>	d <sub>4</sub>	d <sub>6</sub>	G <sub>1</sub>	G <sub>2</sub>	k	z				孔径 Dia- meter S
9	22000	55	90	120	115	65	2.5	67.5	24	428	350	356	565	165	388	6 ±1.5	18	24	250	7
10	31000	55	90	130	125	70	2.5	72.5	28	472	394	400	585	174	436	8 ±1.5	18	28	300	9
11	42000	55	90	140	135	82.5	2.5	85.0	32	525	425	436	616	204	485	8 ±1.5	22	20	370	13
12	60000	55	90	160	155	90	2.5	92.5	34	605	495	510	630	224	555	9 ±1.5	26	20	500	17
13	83000	55	90	180	175	95	2.5	97.5	39	645	535	554	688	241	595	11 ±1.5	26	24	620	21
14	117000	55	90	210	205	105	2.5	107.5	42	720	610	629	711	278	665	9	26	32	880	33
16	160000	70	120	230	225	110	2.5	112.5	44	770	660	680	853	285	715	10	26	36	1100	42
17	202000	70	120	250	245	120	2.5	122.5	50	895	750	775	879	294	830	10	33	24	1580	60
18	244000	80	140	260	255	120	2.5	122.5	50	930	785	815	1013.5	303	865	10	33	32	2000	70
19	295000	80	140	280	275	135	2.5	137.5	56	980	840	870	1036.5	327.5	915	12	33	36	2100	85
20	354000	80	140	300	295	135	2.5	137.5	56	980	840	870	1036.5	327.5	915	12	33	36	2200	75
21	392000	80	140	310	305	152	2.5	154.5	62	1115	935	960	1093	354	1025	24	39	32	2785	115
22	450000	80	140	330	325	152	2.5	154.5	62	1115	935	960	1093	354	1025	24	39	32	2950	105
23	513000	95	160	350	345	164	2.5	166.5	68	1210	1025	1056	1222	380	1120	28	39	36	3625	155
24	592000	95	160	360	355	164	2.5	166.5	68	1210	1025	1056	1222	380	1120	28	39	36	4100	135
25	684000	95	160	380	375	180	2.5	182.5	74	1320	1115	1150	1284.5	407	1220	29	45	36	5000	195
26	763000	95	160	400	395	180	2.5	182.5	74	1320	1115	1150	1284.5	407	1220	29	45	36	5400	170
27	852000	110	180	430	425	191	2.5	193.5	81	1460	1215	1248	1470	453	1345	31	52	32	6400	250
28	950000	110	180	450	445	191	2.5	193.5	81	1460	1215	1248	1470	453	1345	31	52	32	6875	220
29	1060000	110	180	460	450	197.5	5	202.5	87	1565	1320	1355	1517	483	1450	34	52	36	8190	310
30	1200000	110	180	480	470	197.5	5	202.5	87	1565	1320	1355	1517	483	1450	34	52	36	8715	280
31	1330000	120	210	480	470	232	5	237.0	94	1665	1400	1443	1585	538	1545	36	62	32	10700	390
32	1500000	120	210	510	500	232	5	237.0	94	1665	1400	1443	1585	538	1545	36	62	32	11200	360
33	1680000	130	210	530	520	242	5	247.0	100	1755	1495	1536	1710	573	1635	36	62	36	12950	470
34	1920000	130	210	570	560	242	5	247.0	100	1755	1495	1536	1710	573	1635	36	62	36	13800	430

35+36 根据用户要求供货 On request

- 1)当d<sub>1</sub> < 100时公差为m6, 当d<sub>1</sub> > 100时公差为n6
- 2)不含胀紧盘与润滑油的重量
- 3)有关平键(符合GB/T1096-2003)与中心孔请参24页
- 4)当尺寸 < 160时公差为h6
- 5)孔的分布类型见23页

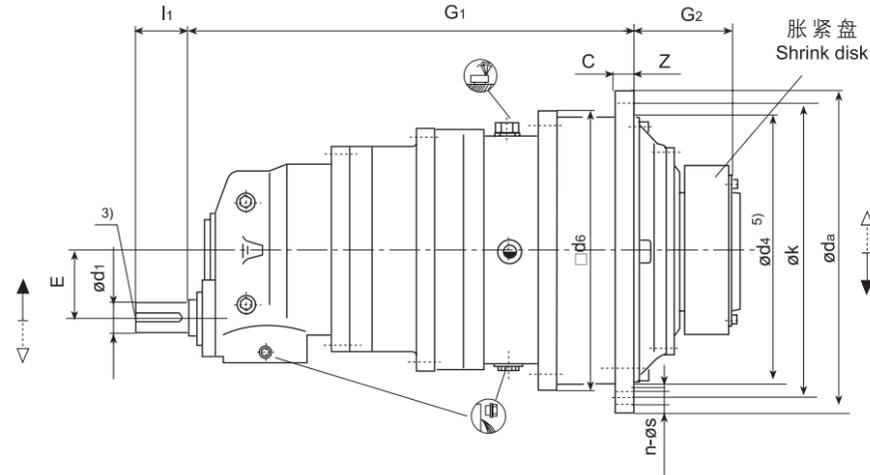
- 1)shaft diameter d<sub>1</sub> < 100,tolerance m6;shaft diameter d<sub>1</sub> > 100, tolerance n6
- 2)Weight without shrink disk and oil
- 3)For parallel key(GB/T1096-2003)and centre hole see page 24
- 4) < 160h6
- 5)For hole pattern,see page 23

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB3NA..  
规格(sizes) 9..36

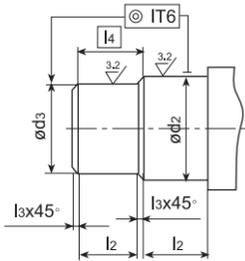
		额定功率 P <sub>N</sub> Nominal power ratings (kW)																																												
iN	n1 r/min	n2	规格 Sizes																																											
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36																	
140	1500	10.7	24.8	34.9	47.3	68	94	132	180	228	275	332	399	442	507	578	667	711	860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
	1000	7.1	16.5	23.3	31.5	45	62	88	120	152	183	222	266	294	338	385	445	514	573	640	714	796	901	999	1127	1262	1442	1682	1953	-	-	-	-	-	-	-	-	-	-							
	750	5.4	12.4	17.5	23.7	34	47	66	90	114	137	166	199	221	253	289	333	385	430	480	535	597	676	749	845	946	1082	1262	1465	-	-	-	-	-	-	-	-	-	-	-						
160	1500	9.4	21.7	30.6	41.4	59	82	115	158	199	241	291	349	406	474	554	647	711	860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
	1000	6.3	14.5	20.4	27.6	39	55	77	105	133	160	194	233	258	296	337	389	450	501	560	624	697	789	874	986	1104	1262	1472	1709	-	-	-	-	-	-	-	-	-	-	-	-					
	750	4.7	10.8	15.3	20.7	30	41	58	79	100	120	145	174	193	222	253	292	337	376	420	468	522	591	656	739	828	946	1104	1281	-	-	-	-	-	-	-	-	-	-	-	-					
180	1500	8.3	19.3	27.2	36.8	53	73	103	140	177	214	258	310	343	394	450	519	599	669	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	1000	5.6	12.9	18.1	24.5	35	48	68	93	118	143	172	207	229	263	300	346	400	446	498	555	619	701	777	876	981	1122	1309	1519	-	-	-	-	-	-	-	-	-	-	-	-	-				
	750	4.2	9.6	13.6	18.4	26	36	51	70	88	107	129	155	172	197	225	259	300	334	373	416	464	526	583	657	736	841	981	1139	-	-	-	-	-	-	-	-	-	-	-	-	-				
200	1500	7.5	17.3	24.4	33.1	47	65	92	126	159	192	233	279	309	355	405	467	539	602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	1000	5.0	11.6	16.3	22.1	32	44	62	84	106	128	155	186	206	237	270	311	360	401	448	499	557	631	699	789	883	1009	1178	1367	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	750	3.8	8.7	12.2	16.6	24	33	46	63	80	96	116	140	155	177	202	233	270	301	336	375	418	473	524	591	662	757	883	1025	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
225	1500	6.7	15.4	21.7	29.4	42	58	82	112	142	171	207	248	275	315	360	415	479	535	597	666	743	841	932	1051	1178	1346	1570	1823	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	1000	4.4	10.3	14.5	19.6	28	39	55	75	94	114	138	165	189	210	240	277	320	357	398	444	495	561	622	701	785	897	1047	1215	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	750	3.3	7.7	10.9	14.7	21	29	41	56	71	86	103	124	137	158	180	207	240	267	299	333	372	421	466	526	589	673	785	911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
250	1500	6.0	13.9	19.6	26.5	38	52	74	101	127	154	186	223	247	284	324	373	432	481	538	599	669	757	839	946	1060	1211	1413	1640	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1000	4.0	9.3	13.0	17.7	25	35	49	67	85	103	124	149	165	189	216	249	288	321	358	400	446	505	559	631	707	808	942	1094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	750	3.0	6.9	9.8	13.2	19	26	37	50	64	77	93	112	124	142	162	187	216	241	269	300	334	379	420	473	530	606	707	820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
280	1500	5.4	12.4	17.5	23.7	34	47	66	90	114	137	166	199	221	253	289	333	385	430	480	535	597	676	749	845	946	1082	1262	1465	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	3.6	8.3	11.6	15.8	23	31	44	60	76	92	111	133	147	168	193	222	257	287	320	357	398	451	499	563	631	721	841	976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	750	2.7	6.2	8.7	11.8	17	23	33	45	57	69	83	100																																	

## TPB系列行星减速器 TPB series planetary gear units



## 型号(Type) TPB3SA.. 规格(sizes) 9..36

工作机连接轴  
Shaft end of driven machine



传动比: iN=280...900  
Ratio: iN=280...900

TPB3SA 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension		工作机连接轴 Shaft end of driven machine										法兰孔 Flange bolts	重量 Weight (kg)	油量 Oil quantity (l)						
		d <sub>1</sub> <sup>1)</sup>	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup>	d <sub>3</sub> <sup>4)</sup>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	c	d <sub>6</sub>	d <sub>7</sub>	d <sub>8</sub>	E				G <sub>1</sub>	G <sub>2</sub>	k	z	孔径 Dia- meter S	数量 Qty. n
9	22000	38	60	120	115	65	2.5	67.5	24	428	350	356	90	565	165	388	6 <sub>+1.5</sub>	18	24	270	7	
10	31000	38	60	130	125	70	2.5	72.5	28	472	394	400	90	585	174	436	8 <sub>+1.5</sub>	18	28	300	9	
11	42000	38	60	140	135	82.5	2.5	85.0	32	525	425	436	90	616	204	485	8 <sub>+1.5</sub>	22	20	390	13	
12	60000	38	60	160	155	90	2.5	92.5	34	605	495	510	90	630	224	555	9 <sub>+1.5</sub>	26	20	540	17	
13	83000	38	60	180	175	95	2.5	97.5	39	645	535	554	90	688	241	595	11 <sub>+1.5</sub>	26	24	710	2	
14	117000	38	60	210	205	105	2.5	107.5	42	720	610	629	90	711	278	665	9	26	32	930	33	
16	160000	55	90	230	225	110	2.5	112.5	44	770	660	680	115	853	285	715	10	26	36	1115	42	
17	202000	55	90	250	245	120	2.5	122.5	50	895	750	775	115	879	294	830	10	33	24	1625	60	
18	244000	70	120	260	255	120	2.5	122.5	50	930	785	815	140	1013.5	303	865	10	33	32	2060	70	
19	295000	70	120	280	275	135	2.5	137.5	56	980	840	870	140	1036.5	327.5	915	12	33	36	2160	85	
20	354000	70	120	300	295	135	2.5	137.5	56	980	840	870	140	1036.5	327.5	915	12	33	36	2260	72	
21	392000	70	120	310	305	152	2.5	154.5	62	1115	935	960	140	1093	354	1025	24	39	32	2870	115	
22	450000	70	120	330	325	152	2.5	154.5	62	1115	935	960	140	1093	354	1025	24	39	32	3040	105	
23	513000	80	140	350	345	164	2.5	166.5	68	1210	1025	1056	170	1222	380	1120	28	39	36	3730	155	
24	592000	80	140	360	355	164	2.5	166.5	68	1210	1025	1056	170	1222	380	1120	28	39	36	4220	135	
25	684000	80	140	380	375	180	2.5	182.5	74	1320	1115	1150	170	1284	407	1220	29	45	36	5150	195	
26	763000	80	140	400	395	180	2.5	182.5	74	1320	1115	1150	170	1284	407	1220	29	45	36	5560	170	
27	852000	90	160	430	425	191	2.5	193.5	81	1460	1215	1248	200	1470	453	1345	31	52	32	6580	250	
28	950000	90	160	450	445	191	2.5	193.5	81	1460	1215	1248	200	1470	453	1345	31	52	32	7080	220	
29	1060000	90	160	460	450	197.5	5	202.5	87	1565	1320	1355	200	1517	483	1450	34	52	36	8400	310	
30	1200000	90	160	480	470	197.5	5	202.5	87	1565	1320	1355	200	1517	483	1450	34	52	36	8970	280	
31	1330000	100	180	480	470	232	5	237.0	94	1665	1400	1443	230	1617	538	1545	36	62	32	11000	390	
32	1500000	100	180	510	500	232	5	237.0	94	1665	1400	1443	230	1617	538	1545	36	62	32	11500	360	
33	1680000	120	210	530	520	242	5	247.0	100	1755	1495	1536	265	1735	573	1635	36	62	36	13300	470	
34	1920000	120	210	570	560	242	5	247.0	100	1755	1495	1536	265	1735	573	1635	36	62	36	14200	430	
35																						
36																						

1)当d<sub>1</sub> < 100时公差为m6,当d<sub>1</sub> > 100时公差为n6

2)不含胀紧盘与润滑油的重量

3)有关平键(符合GB/T1096-2003)与中心孔请参24页

4)当尺寸 < 160时公差为h6

5)孔的分布类型见23页

1)shaft diameter d<sub>1</sub> < 100, tolerance m6; shaft diameter d<sub>1</sub> > 100, tolerance n6

2)Weight without shrink disk and oil

3)For parallel key(GB/T1096-2003)and centre hole see page 24

4) < 160h6

5)For hole pattern, see page 23

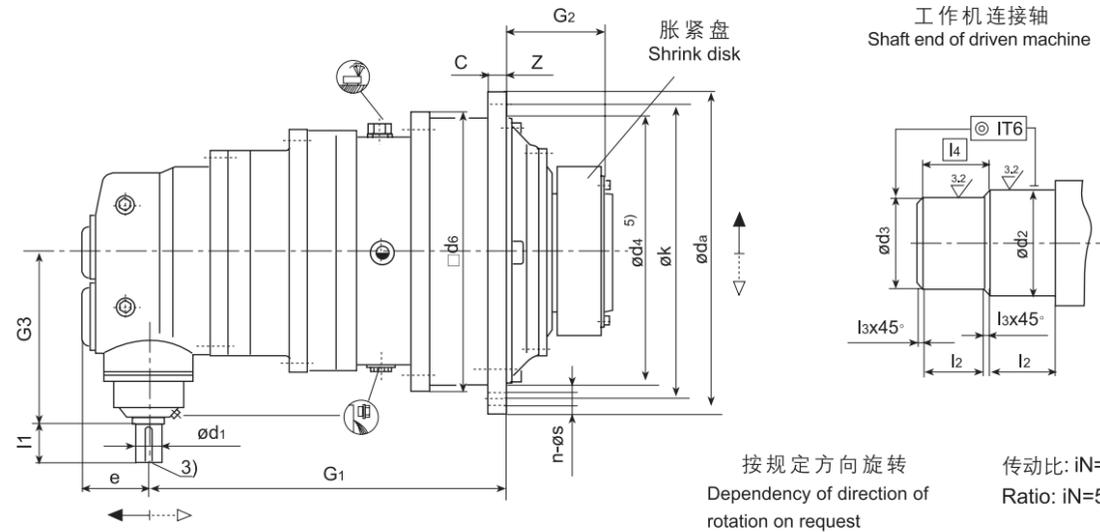
## TPB系列行星减速器 TPB series planetary gear units

## 型号(Type) TPB3S.. 规格(sizes) 9..36

		额定功率 PN Nominal power ratings (kW)																												
iN	n1 r/min	n2 r/min	规格 Sizes																											
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
280	1500	5.4	13.5	17.6	24	34	47	67	91	115	139	168	202	223	256	292	337	389	434	485	541	603	683	757	854	956	1093	1275	1480	
	1000	3.6	8.3	12	16	23	31	44	61	77	93	112	134	149	171	195	225	260	290	323	361	402	455	505	569	638	729	850	987	
	750	2.7	6.3	8.8	12	17	24	33	46	58	69	84	101	112	128	146	168	195	217	242	270	302	342	379	427	478	546	638	740	
315	1500	4.8	11	16	21	30	42	59	81	102	123	149	179	198	228	260	300	346	386	431	481	536	607	673	759	850	971	1133	1316	
	1000	3.2	7.4	10.5	14	20	28	39	54	68	82	100	119	132	152	173	200	231	257	287	320	358	405	449	506	567	648	756	877	
	750	2.4	5.6	7.8	11	15	21	30	40	51	62	75	90	99	114	130	150	173	193	216	240	268	304	336	379	425	486	567	658	
355	1500	4.2	10	14	19	27	37	53	72	91	110	132	159	176	202	230	266	307	343	383	427	476	539	597	673	754	862	1006	1167	
	1000	2.8	6.7	9.3	13	18	25	35	48	60	73	88	106	117	135	154	177	205	228	255	284	317	359	398	449	503	575	670	778	
	750	2.1	5	7	9	13	19	26	36	45	55	66	79	88	101	115	133	154	171	191	213	238	269	299	337	377	431	503	584	
400	1500	3.8	8.8	12.4	17	24	33	47	64	80	97	118	141	156	179	204	236	273	304	339	379	422	478	530	598	669	765	893	1036	
	1000	2.5	5.8	8.2	11	16	22	31	43	54	65	78	94	104	120	136	157	182	203	226	252	282	319	353	398	446	510	595	691	
	750	1.9	4.4	6.2	8	12	17	23	32	40	49	59	71	78	90	102	118	136	152	170	189	211	239	265	299	335	383	446	518	
450	1500	3.3	7.8	11	15	21	29	41	57	72	86	104	125	139	159	182	210	242	270	302	336	375	425	471	531	595	680	793	921	
	1000	2.2	5.2	7.3	10	14	20	28	38	48	58	70	84	93	106	121	140	162	180	201	224	250	283	314	354	397	453	529	614	
	750	1.7	3.4	5.5	7.4	11	15	21	28	36	43	52	63	69	80	91	105	121	135	151	168	188	213	236	266	298	340	397	460	
500	1500	3.0	7	10	13.4	19	26	37	51	64	78	94	113	125	143	164	189	218	243	272	303	338	383	424	478	536	612	714	829	
	1000	2.0	4.7	6.6	8.9	13	18	25	34	43	52	63	75	83	96	109	126	145	162	181	202	225	255	283	319	357	408	476	553	
	750	1.5	3.5	5	6.7	10	13	19	26	32	39	47	56	62	72	82	94	109	122	136	151	169	191	212	239	268	306	357	414	
560	1500	2.7	6.3	8.8	12	17	24	33	46	57	69	84	101	112	128	146	168	195	217	242	270	302	342	379	427	471	546	638	740	
	1000	1.8	4.2	6	8	11	16	22	30	38	46	56	67	74	85	97	112	130	145	162	180	201	228	252	285	319	364	425	493	
	750	1.3	3.1	4.4	6	9	12	17	23	29	35	42	50	56	64	73	84	97	109	121	135	151	171	189	213	239	273	319	370	
630	1500	2.4	5.6	7.8	10.6	15	21	30	40	51	62	75	90	99	114	130	150	173	193	216	240	268	304	336	379	425	486	567	658	
	1000	1.6	3.7	5.2	7	10	14	20	27	34	41	50	60	66	76	87	100	115	129	144	160	179	202	224	253	283	324	378	439	
	750	1.2	2.8	3.9	5.3	8	10	15	20	26	31	37	45	50	57	65	75	87	97	108	120	134	152	168	190	213	243	283	329	
710	1500	2.1	4.5	7	9.4	13	19																							

## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB3KAZ..  
规格(sizes) 9..30



按规定方向旋转  
Dependency of direction of rotation on request

传动比: iN=560...4000  
Ratio: iN=560...4000

TPB3KAZ 机座号 Size	额定输出扭矩 Nom. output torque T <sub>2N</sub> (N.m)	输入轴尺寸 Input shaft dimension				工作机连接轴 Shaft end of driven machine								c	d <sub>5</sub>	d <sub>4</sub> h <sub>7</sub>	d <sub>6</sub>	e	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	k	z	法兰孔 Flange Dia- meter S	数量 Qty. n	重量 Weight (kg)	油量 Oil quan- tity (l)
		d <sub>1</sub> <sup>1)</sup> (N < 2000)	l <sub>1</sub>	d <sub>1</sub> <sup>1)</sup> (N > 2400)	l <sub>1</sub>	d <sub>2</sub> <sup>4)</sup> g <sub>6</sub>	d <sub>3</sub> <sup>4)</sup> g <sub>6</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>																	
9	22000	30	70	25	60	120	115	65	2.5	67.5	24	428	350	356	122	520	165	320	388	6 <sub>+1.5</sub>	18	24	180	7			
10	31000	30	70	25	60	130	125	70	2.5	72.5	28	472	394	400	122	540	174	320	436	8 <sub>+1.5</sub>	18	28	200	9			
11	42000	30	70	25	60	140	135	82.5	2.5	85	32	525	425	436	122	571	204	320	485	8 <sub>+1.5</sub>	22	20	315	15			
12	60000	30	70	25	60	160	155	90	2.5	92.5	34	605	495	510	122	585	224	320	555	9 <sub>+1.5</sub>	26	20	470	20			
13	83000	30	70	25	60	180	175	95	2.5	97.5	39	645	535	554	122	643	241	320	595	11 <sub>+1.5</sub>	26	24	595	21			
14	117000	30	70	25	60	210	205	105	2.5	107.5	42	720	610	629	122	666	278	320	665	9	26	32	890	33			
16	160000	35	80	28	60	230	225	110	2.5	112.5	44	770	660	680	145	730	285	375	715	10	26	36	1137	42			
17	202000	35	80	28	60	250	245	120	2.5	122.5	50	895	750	775	145	756	294	375	830	10	33	24	1660	60			
18	244000	45	100	35	80	260	255	120	2.5	122.5	50	930	785	815	180	859.5	303	445	865	10	33	32	2100	70			
19	295000	45	100	35	80	280	275	135	2.5	137.5	56	980	840	870	180	882.5	327.5	445	915	12	33	36	2200	85			
20	354000	45	100	35	80	300	295	135	2.5	137.5	56	980	840	870	180	882.5	327.5	445	915	12	33	36	2300	75			
21	392000	45	100	35	80	310	305	152	2.5	154.5	62	1115	935	960	180	939	354	445	1025	24	39	32	2930	115			
22	450000	45	100	35	80	330	325	152	2.5	154.5	62	1115	935	960	180	939	354	445	1025	24	39	32	3100	105			
23	513000	55	110	40	100	350	345	164	2.5	166.5	68	1210	1025	1056	194	1069	380	520	1120	28	39	36	3800	155			
24	592000	55	110	40	100	360	355	164	2.5	166.5	68	1210	1025	1056	194	1069	380	520	1120	28	39	36	4300	135			
25	684000	55	110	40	100	380	375	180	2.5	182.5	74	1320	1115	1150	194	431	407	520	1220	29	45	36	5250	195			
26	763000	55	110	40	100	400	395	180	2.5	182.5	74	1320	1115	1150	194	431	407	520	1220	29	45	36	5660	170			
27	852000	70	135	50	110	430	425	191	2.5	193.5	81	1460	1215	1248	240	1205.5	453	615	1345	31	52	32	6680	250			
28	950000	70	135	50	110	450	445	191	2.5	193.5	81	1460	1215	1248	240	1205.5	453	615	1345	31	52	32	7180	220			
29	1060000	70	135	50	110	460	450	197.5	5	202.5	87	1565	1320	1355	240	1252.5	483	615	1450	34	52	36	8500	310			
30	1200000	70	135	50	110	480	470	197.5	5	202.5	87	1565	1320	1355	240	1252.5	483	615	1450	34	52	36	9070	280			
31~36																								根据用户要求供货 On request			

1)当d<sub>1</sub> < 100时公差为m6,当d<sub>1</sub> > 100时公差为n6  
2)不含胀紧盘与润滑油的重量  
3)有关平键(符合GB/T1096-2003)与中心孔请参24页  
4)当尺寸 < 160时公差为h6  
5)孔的分布类型见23页

1)shaft diameter d<sub>1</sub> < 100,tolerance m6;shaft diameter d<sub>1</sub> > 100, tolerance n6  
2)Weight without shrink disk and oil  
3)For parallel key(GB/T1096-2003)and centre hole see page 24  
4) < 160h6  
5)For hole pattern,see page 23

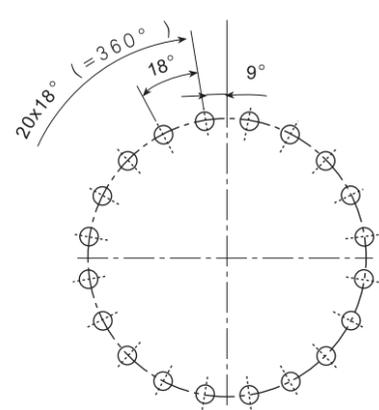
## TPB系列行星减速器 TPB series planetary gear units

型号(Type) TPB3K..  
规格(sizes) 9..30

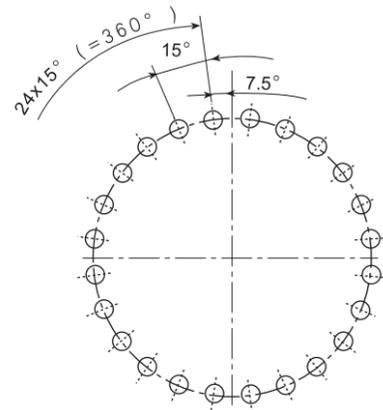
		额定功率 P <sub>N</sub> Nominal power ratings (kW)																													
iN	n1 r/min	n2 r/min	规格 Sizes																												
			9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31~36							
560	1500	2.68	6.3	9	12	17	24	33	46	58	70	84	101	112	128	146	169	195	218	243	271	303	342								
	1000	1.79	4.2	6	8	11	16	22	30	38	46	56	67	75	86	98	113	130	145	162	181	202	228								
	750	1.34	3.1	4.4	6	9	12	17	23	29	35	42	51	56	64	73	84	98	109	122	136	151	171								
630	1500	2.38	5.6	7.8	11	15	21	30	41	51	62	75	90	99	114	130	150	174	194	216	241	269	304								
	1000	1.59	3.7	5.2	7	10	14	20	27	34	41	50	60	66	76	87	100	116	129	144	161	179	203								
	750	1.19	2.8	3.9	5	8	11	15	20	26	31	37	45	50	57	65	75	87	97	108	121	134	152								
710	1500	2.11	5.0	7	9	14	19	26	36	45	55	66	80	88	101	115	133	154	172	192	214	239	270								
	1000	1.41	3.3	4.5	6	9	12	18	24	30	37	44	53	59	68	77	89	103	115	128	143	159	180								
	750	1.06	2.5	3.5	5	7	9	13	18	23	27	33	40	44	51	58	67	77	86	96	107	119	135								
800	1500	1.88	4.4	6	8	12	17	23	32	40	49	59	71	78	90	102	118	137	152	170	190	212	240								
	1000	1.25	2.9	4	6	8	11	16	21	27	32	39	47	52	60	68	79	91	102	113	127	141	160								
	750	0.94	2.2	3	4	6	8	12	16	20	24	29	35	39	45	51	59	68	76	85	95	106	120								
900	1500	1.67	3.9	5.5	7.5	11	15	21	28	36	43	5.2	63	70	80	91	105	121	136	151	169	188	213								
	1000	1.11	2.6	3.7	5	7	10	14	19	24	29	35	42	46	53	61	70	81	90	101	112	125	142								
	750	0.83	2.0	2.7	3.7	5	7	10	14	18	22	26	31	35	40	46	53	61	68	76	84	94	107								
1000	1500	1.50	3.5	5	6.7	10	13	19	26	32	39	47	57	63	72	82	95	109	122	136	152	169	192								
	1000	1.00	2.3	3.3	4.5	6	9	12	17	22	26	31	38	42	48	55	63	73	81	91	101	113	128								
	750	0.75	1.8	2.5	3.4	5	7	9	13	16	19	24	28	31	36	41	47	55	61	68	76	85	96								
1120	1500	1.34	3.1	4.4	6	9	12	17	23	29	35	42	51	56	64	73	84	98	109	122	136	151	171								
	1000	0.89	2.1	2.9	4	6	8	11	15	19	23	28	34	37	43	49	56	65	73	81	90	101	114								
	750	0.67	1.6	2.2	3	4.5	6	8	11	14	17	21	25	28	32	37	42	49	54	61	68	76	86								
1250	1500	1.20	2.8	4.0	5.4	8	11	15	20	26	31	38	45	50	58	66	76	87	98	109	121	136	153								
	1000	0.80	1.9	2.6	3.6	5	7	10	14	17	21	25	30	33	38	44	50	58	65	73	81	90	102								
	750	0.60	1.4	2.0	2.7	4	5	7	10	13	16	19	23	25	29	33	38	44	49	54	61	68	77								
1400	1500	1.07	2.5	3.5	4.8	7	9	13	18	23	28	34	40	45	51	59	68	78	87	97	108	121	137								
	1000	0.71	1.7	2.4	3.2	5	6	9	12	15	19	22	27	30	34	39	45	52	58	65	72	81	91								
	750	0.54	1.3	1.8	2.4	3.5	4.5	7	9	12	14	17	20	22	26	29	34	39	44	49	54	61	68								
1600	1500	0.94	2.2	3.1	4.2	6	8	12	16	20	24	29	35	39	45	51	59	68	76	85	95	106	120								
	1000	0.63	1.5	2.1	2.8	4	6	8	11	13	16	20	24	26	30	34	39	46	51	57	63	71	80								
	750	0.47	1.1	1.5	2.1	3	4	6	8	10	12	15	18	20	22	26	30	34	38	4											

**TPB系列行星减速器输出法兰孔布置形式**  
TPB series planetary gear units hole patterns on output flange

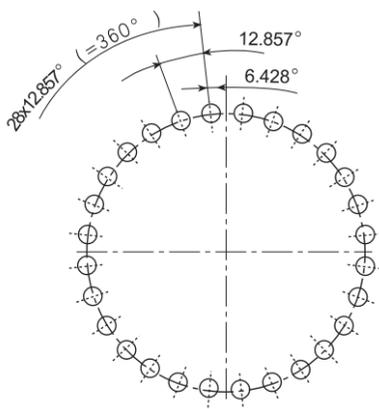
从输出端看  
Viewing on output shaft



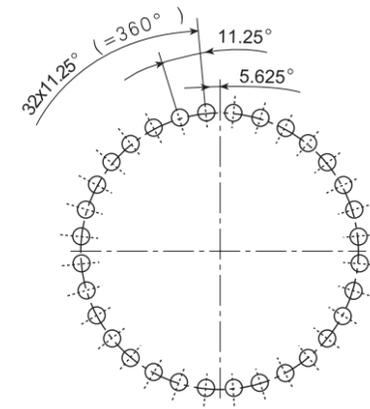
规格/Size:11、12



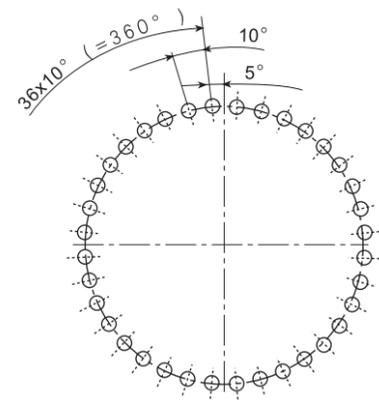
规格/Size:9、13、17



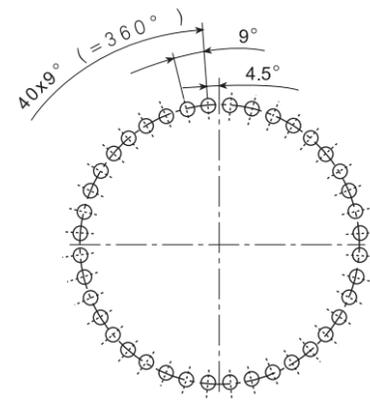
规格/Size:10



规格/Size:14、18、21、22、27、28、31、32



规格/Size:16、19、20、23、24、25、26、29、30、33、34



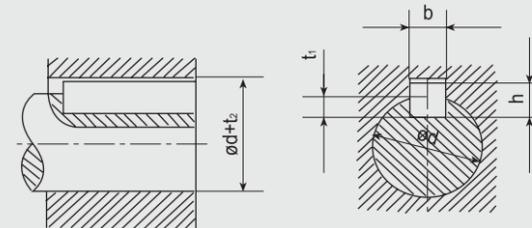
规格/Size:35、36

**TPB系列行星减速器轴端螺纹孔、平键和键槽**  
TPB series planetary gear units centre holes in shaft ends, parallel key and keyway

轴端螺纹孔		Centre holes in shaft end										
轴径 $\phi d$ Diameter		> 16-21	> 21-24	> 24-30	> 30-38	> 38-50	> 50-85	> 85-130	> 130-225	> 225-320	> 320-500	> 500-700
螺孔尺寸 Screw		M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48

平键和键槽		Parallel key and keyway				
直径 Diameter $d$	宽度 Width $b$	高度 Height $h$	轴键槽深度 Depth of keyway in shaft $t_1$	轮毂键槽深度 Depth of keyway in hub $d+t_2$		
> 8-10	3	3	1.8	$d+1.4$		
> 10-12	4	4	2.5	$d+1.8$		
> 12-17	5	5	3	$d+2.3$		
> 17-22	6	6	3.5	$d+2.8$		
> 22-30	8	7	4	$d+3.3$		
> 30-38	10	8	5	$d+3.3$		
> 38-44	12	8	5	$d+3.3$		
> 44-50	14	9	5.5	$d+3.8$		
> 50-58	16	10	6	$d+4.3$		
> 58-65	18	11	7	$d+4.4$		
> 65-75	20	12	7.5	$d+4.9$		
> 75-85	22	14	9	$d+5.4$		
> 85-95	25	14	9	$d+5.4$		
> 95-110	28	16	10	$d+6.4$		
> 110-130	32	18	11	$d+7.4$		
> 130-150	36	20	12	$d+8.4$		
> 150-170	40	22	13	$d+9.4$		
> 170-200	45	25	15	$d+10.4$		
> 200-230	50	28	17	$d+11.4$		
> 230-260	56	32	20	$d+12.4$		
> 260-290	63	32	20	$d+12.4$		
> 290-330	70	36	22	$d+14.4$		
> 330-380	80	40	25	$d+15.4$		
> 380-440	90	45	28	$d+17.4$		
> 440-500	100	50	31	$d+19.5$		

平键紧固无锥度联接。  
平键和键槽根据GB/T1096-2003标准确定  
Drive type fastening without taper action.  
Parallel key and keyway acc.to GB/T1096-2003

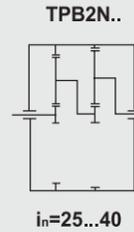


## TPB系列行星减速器 TPB series planetary gear units

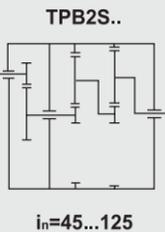
型号 TPB2N.., TPB2S type TPB2N.., TPB2S..

实际传动比 Actual ratios

规格 Size TPB2N	实际传动比 Actual ratios				
	25	28	31.5	35.5	40
9	25.634	28.058	31.142	35.201	40.781
10	25.634	28.058	31.142	35.201	40.781
11	25.875	28.233	31.207	35.072	40.301
12	24.983	27.260	30.130	33.863	38.912
13	24.958	27.318	30.321	34.272	39.706
14	24.958	27.318	30.321	34.272	39.706
16	24.750	27.090	30.068	33.987	39.375
17	24.750	27.090	30.068	33.987	39.375
18	24.958	27.318	30.321	34.272	39.706
19/20	26.622	29.139	32.342	36.557	42.353
21/22	26.622	29.139	32.342	36.557	42.353
23/24	26.872	29.321	32.409	36.424	41.855
25/26	26.872	29.321	32.409	36.424	41.855
27/28	26.622	29.139	32.342	36.557	42.353
29/30	26.622	29.139	32.342	36.557	42.353
31/32	26.872	29.321	32.409	36.424	41.855
33/34	26.622	29.139	32.342	36.557	42.353
35/36	26.872	29.321	32.409	36.424	41.855



规格 Size TPB2S	实际传动比 Actual ratios									
	45	50	56	63	71	80	90	100	112	125
9	45.601	51.544	59.715	61.953	71.775	78.782	91.272	99.735	115.55	124.74
10	45.601	51.544	59.715	61.953	71.775	78.782	91.272	99.735	115.55	124.74
11	43.209	48.561	55.802	63.399	72.853	81.303	93.426	99.678	114.54	123.14
12	41.719	46.887	53.878	61.213	70.340	78.499	90.205	96.241	110.59	118.90
13	43.797	49.505	57.353	59.977	69.485	78.827	91.324	96.963	111.18	119.12
14	43.797	49.505	57.353	59.977	69.485	78.827	91.324	95.963	111.18	119.12
16	42.318	47.833	55.417	61.438	71.178	78.788	91.278	96.594	111.91	120.31
17	42.318	47.833	55.417	61.438	71.178	78.788	91.278	96.594	111.91	120.31
18	42.867	48.454	56.136	60.320	69.882	78.976	91.496	95.963	111.18	119.12
19/20	45.725	51.684	59.878	64.341	74.541	84.241	97.596	102.36	118.59	127.06
21/22	46.357	52.399	60.706	66.084	76.561	84.746	98.182	103.90	120.37	129.41
23/24	45.373	50.993	58.597	64.442	74.051	82.781	95.124	101.60	116.75	125.56
25/26	45.373	50.993	58.597	64.442	74.051	82.781	95.124	101.60	116.75	125.56
27/28	46.948	53.067	61.480	66.345	76.863	84.241	97.596	102.36	118.59	127.06
29/30	46.948	53.067	61.480	66.345	76.863	84.241	97.596	102.36	118.59	127.06
31/32	45.575	51.221	58.858	66.102	75.958	83.932	96.448	104.30	119.86	127.56
33/34	45.481	51.409	59.559	66.345	76.863	84.241	97.596	104.69	121.28	129.08
35/36	45.373	50.993	58.597	65.562	75.338	81.252	93.368	100.53	115.52	129.20

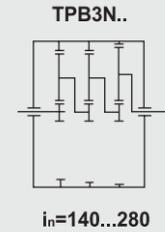


## TPB系列行星减速器 TPB series planetary gear units

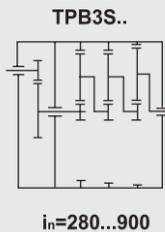
型号 TPB3N.., TPB3S type TPB3N.., TPB3S..

实际传动比 Actual ratios

规格 Size TPB3N	实际传动比 Actual ratios						
	140	160	180	200	225	250	280
9	146.81	165.95	192.25	210.43	233.57	264.01	305.86
10	146.81	165.95	192.25	210.43	233.57	264.01	305.86
11	147.12	165.34	189.99	207.96	230.82	260.90	302.26
12	142.04	159.64	183.44	200.79	222.86	251.90	291.84
13	142.94	161.57	187.19	204.88	227.41	257.04	291.79
14	142.94	161.57	187.19	204.88	227.41	257.04	291.79
16	143.08	161.73	187.37	204.45	225.98	253.97	291.84
17	143.08	161.73	187.37	204.45	225.98	253.97	291.84
18	142.94	161.57	187.19	204.88	227.41	257.04	291.79
19/20	152.47	172.34	199.66	218.54	242.57	274.18	317.65
21/22	152.47	172.34	199.66	218.54	242.57	274.18	317.65
23/24	142.79	171.71	197.32	215.97	239.71	270.95	313.91
25/26	142.79	171.71	197.32	215.97	239.71	270.95	313.91
27/28	152.47	172.34	199.66	218.54	242.57	274.18	317.65
29/30	152.47	172.34	199.66	218.54	242.57	274.18	317.65
31/32	152.79	171.71	197.32	215.97	239.71	270.95	313.91
33/34	153.90	173.96	201.54	219.91	243.07	273.18	313.91
35/36	154.22	173.33	199.17	217.32	240.21	269.96	310.22



规格 Size TPB3S	实际传动比 Actual ratios										
	280	315	355	400	450	500	560	630	710	800	900
9	295.21	333.68	386.58	401.07	464.65	510.01	590.87	645.65	748.01	807.55	935.57
10	295.21	333.68	386.58	401.07	464.65	510.01	590.87	645.65	748.01	807.55	935.57
11	295.82	332.46	382.03	399.60	459.18	508.15	583.92	643.29	739.21	798.04	924.56
12	285.62	320.99	368.6	385.82	443.35	490.62	563.78	621.11	713.73	770.53	892.68
13	287.42	324.88	376.39	390.49	452.40	496.56	575.29	628.63	728.29	786.25	910.90
14	287.42	324.88	376.39	390.49	452.40	496.56	575.29	628.63	728.29	786.25	910.90
16	268.53	303.53	351.65	396.27	459.10	508.18	588.75	623.03	721.81	776.02	891.73
17	268.53	303.53	351.65	396.27	459.10	508.18	588.75	623.03	721.81	776.02	891.73
18	283.53	320.48	371.29	388.27	449.83	510.30	591.20	621.23	719.72	771.13	893.38
19/20	302.43	341.84	396.04	414.16	479.81	544.32	630.31	662.65	767.70	822.54	952.94
21/22	302.43	341.84	396.04	414.16	479.81	544.32	630.31	662.65	767.70	822.54	952.94
23/24	295.28	331.86	381.34	426.24	489.80	546.61	628.12	662.65	770.08	829.80	961.35
25/26	295.28	331.86	381.34	426.24	489.80	546.61	628.12	670.15	770.08	829.80	961.35
27/28	296.01	334.59	387.63	416.52	482.56	545.35	631.81	670.15	767.70	822.54	952.94
29/30	296.01	334.59	387.63	416.52	482.56	545.35	631.81	662.65	767.70	822.54	952.94
31/32	300.72	337.97	388.37	426.24	489.80	546.61	628.12	670.15	770.08	827.92	959.17
33/34	292.05	330.11	382.45	417.18	483.31	535.90	620.86	657.74	762.02	819.53	941.73
35/36	292.66	328.90	377.95	415.65	477.63	533.94	613.55	655.34	753.05	809.89	930.65



## TPB系列行星减速器

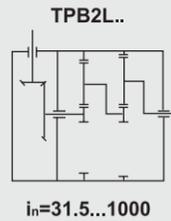
型号 TPB2L..., TPB2K..., TPB3K...  
实际传动比

TPB series planetary gear units

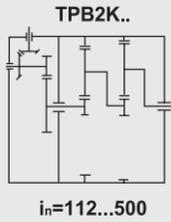
type TPB3N..., TPB2K..., TPB3K...

Actual ratios

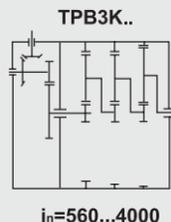
规格 Size TPB2L	实际传动比 Actual ratios											
	31.5	35.5	40	45	50	56	63	71	80	90	100	
9	32.5354	35.6114	39.5264	43.8820	50.4205	55.7279	60.4522	69.6116	79.0529	86.2395	98.2172	
10	32.5354	35.6114	39.5264	43.8820	50.4205	55.7279	60.4522	69.6116	79.0529	86.2395	98.2172	
11	32.8413	35.8344	39.6083	43.4178	50.5248	55.8432	60.5774	69.7558	79.9667	84.4181	98.4206	
12	31.7089	34.5987	38.2425	41.9206	48.7826	53.9176	58.4885	67.3504	77.2092	83.4381	95.0268	
13	31.6775	34.6724	38.4842	42.1855	49.0910	54.2584	62.3262	67.7760	77.6972	83.9655	95.6273	
14	31.6775	34.6724	38.4842	42.1855	49.0910	54.2584	62.3262	67.7760	77.6972	83.9655	95.6273	
16	31.4135	34.3835	38.1635	41.8340	48.6818	53.8062	61.8068	67.2113	77.0497	83.2657	94.8304	
17	31.4135	34.3835	38.1635	41.8340	48.6818	53.8062	61.8068	67.2113	77.0497	83.2657	94.8304	
18	31.4286	34.4000	38.1818	43.4190	49.0910	54.8663	62.3262	67.776	77.6972	83.9655	95.6273	
19/20	33.5238	36.6933	40.7273	46.0255	52.3636	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	
21/22	33.5238	36.6933	40.7273	46.0255	52.3636	58.5241	66.4812	72.2944	82.8770	89.5631	102.0025	
23/24	33.8691	36.9231	40.8116	46.1208	52.4720	58.6452	66.6189	72.4441	83.0486	89.7486	102.2137	
25/26	33.8391	36.9231	40.8116	46.1208	52.1366	58.6452	66.6189	72.4441	83.0486	89.7486	102.2137	
27/28	33.5238	36.6933	40.7273	46.0255	52.0288	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	
29/30	33.5238	36.6933	40.7273	46.0255	52.0288	58.5241	66.4813	72.2944	82.8770	89.5631	102.0025	



规格 Size TPB2K	实际传动比 Actual ratios													
	112	125	140	160	180	200	225	250	280	320	360	400	450	500
9	111.25	125.75	145.69	157.28	175.77	203.53	223.22	242.15	278.84	316.65	345.44	393.42	442.27	487.63
10	111.25	125.75	145.69	157.28	175.77	203.53	223.22	242.15	278.84	316.65	345.44	393.42	442.27	487.63
11	111.83	125.68	144.42	155.27	173.52	200.92	220.36	239.04	275.26	310.60	341.01	388.38	436.6	481.38
12	107.97	121.35	139.44	149.91	167.54	193.99	212.76	230.80	265.77	301.82	329.25	374.98	421.54	464.78
13	107.76	121.80	141.11	151.19	167.85	192.86	213.16	231.23	266.26	302.38	329.86	375.68	422.33	465.64
14	107.76	121.80	141.1	151.19	167.85	192.86	213.16	231.23	266.26	302.38	329.86	375.68	422.33	465.64
16	108.47	122.60	142.04	153.05	167.77	195.23	215.79	234.08	269.55	309.00	333.93	380.31	427.53	471.38
17	108.47	122.60	142.04	153.05	167.77	195.23	215.79	234.08	269.55	309.00	333.93	380.31	427.53	471.38
18	107.76	121.80	141.11	151.19	165.73	192.86	213.16	244.85	266.26	305.24	329.86	375.68	422.33	465.64
19/20	114.94	129.92	150.52	161.27	176.78	205.71	227.37	261.18	284.01	325.59	351.86	400.72	450.48	496.68



规格 Size TPB3K	实际传动比 Actual ratios																	
	560	630	710	800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500	2800	3150	3550	4000
9	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3105.0	3597.2	4167.5
10	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3105.0	3597.2	4167.5
11	567.40	637.68	697.96	774.70	875.66	978.60	1133.1	1242.8	1348.1	1552.4	1762.9	1923.2	2190.3	2462.3	2714.8	3093.6	3584.1	4118.5
12	547.83	615.69	673.90	747.98	845.46	944.85	1094.0	1199.9	1301.6	1498.9	1702.1	1856.9	2114.8	2377.4	2621.2	2986.9	3460.5	3976.5
13	551.29	623.14	682.06	757.04	855.70	956.30	1107.3	1214.4	1317.4	1517.0	1722.8	1879.4	2140.4	2406.1	2652.9	3023.1	3502.4	4057.6
14	551.29	623.14	682.06	757.04	855.70	956.30	1107.3	1214.4	1317.4	1517.0	1722.8	1879.4	2140.4	2406.1	2652.9	3023.1	3502.4	4057.6
16	551.25	623.09	679.88	751.48	844.56	943.84	1092.9	1198.6	1300.2	1497.3	1700.3	1854.9	2112.5	2374.8	2618.4	2983.8	3428.7	3972.2
17	551.25	623.09	679.88	751.48	844.56	943.84	1092.9	1198.6	1300.2	1497.3	1700.3	1854.9	2112.5	2374.8	2618.4	2983.8	3428.7	3972.2
18	544.28	615.21	676.37	747.40	844.81	937.90	1077.6	1191.1	1292.1	1487.8	1689.6	1843.2	2099.2	2359.9	2601.9	2965.0	3435.0	3979.6
19/20	580.56	656.22	718.27	797.23	901.13	1000.4	1149.5	1270.5	1378.2	1587.0	1802.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
21/22	580.56	656.22	718.27	797.23	901.13	1000.4	1149.5	1270.5	1378.2	1587.0	1802.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
23/24	593.88	667.44	730.55	810.87	916.54	1004.7	1169.1	1292.2	1401.8	1614.2	1850.4	1999.7	2277.5	2560.2	2822.8	3216.7	3726.7	4282.4
25/26	593.88	667.44	730.55	810.87	916.54	1004.7	1169.1	1292.2	1401.8	1614.2	1850.4	1999.7	2277.5	2560.2	2822.8	3216.7	3726.7	4282.4
27/28	580.56	656.22	718.27	797.23	901.13	987.80	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3126.6	3664.0	4244.9
29/30	580.56	656.22	718.27	797.23	901.13	987.80	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3126.6	3664.0	4244.9



## TPB系列行星减速器

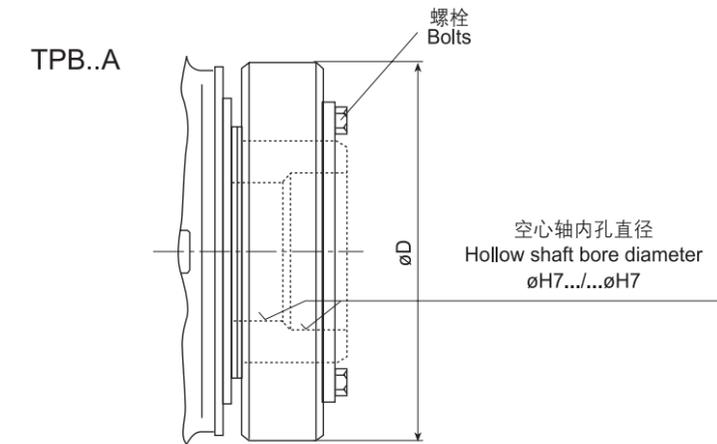
规格9...36

带胀紧盘空心输出轴

TPB series planetary gear units

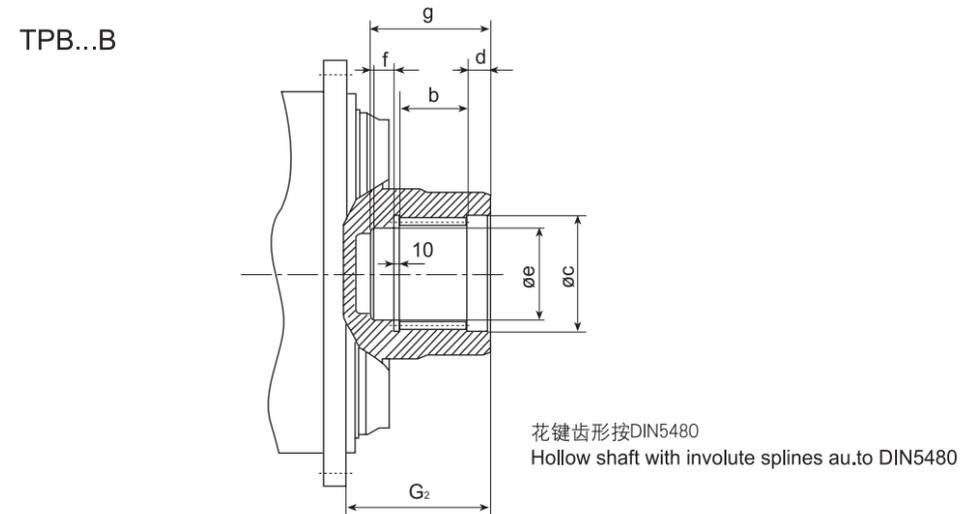
Size 9...36

Howlflow output shaft for shrink disk



机座号 Size	输出扭矩 Output torque $T_{2N}$ (N.m)	胀紧盘 Shrink disk			
		内径 Size	D	螺栓 Bolts	重量 Weight (kg)
9	22000	155	263	M12	15
10	31000	165	290	M16	22
11	42000	185	330	M16	37
12	60000	220	370	M16	54
13	83000	240	405	M20	67
14	117000	280	460	M20	102
16	160000	300	485	M20	118
17	202000	320	520	M20	131
18	244000	340	570	M20	186
19	295000	360	590	M20	204
20	354000	380	650	M24	250
21	392000	390	650	M24	250
22	450000	420	670	M24	300
23	513000	440	740	M24	400
24	592000	460	770	M24	420
25	684000	480	800	M24	500
26	763000	500	850	M27	570
27	852000	530	910	M27	740
28	950000	560	940	M27	770
29	1060000	560	940	M27	770
30	1200000	590	980	M27	900
31	1330000	590	980	M30	900
32	1500000	620	1020	M30	1080
33	1680000	660	1070	M33	1178
34	1920000	700	1140	M33	1345
35	2240000	750	1150	M33	1346
36	2600000	800	1230	M33	1646

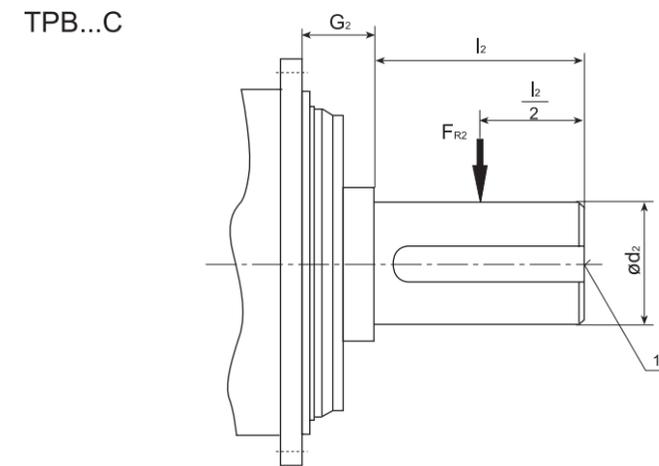
**TPB系列行星减速器** TPB series planetary gear units  
 规格9...30 Size 9...30  
**渐开线花键空心输出轴** Howlflow shaft with involuts splines



机座号 Size	输出扭矩 Output torque T <sub>2N</sub> (N.m)	渐开线花键空心轴 Howlflow output shaft with involute splines							
		内花键规格 Involute splines acc.to	b	c H7	d	e H7	f	G <sub>2</sub>	g
9	22000	120x5x30x22x9H	70	122	40	107	20	165	150
10	31000	130x5x30x24x9H	80	132	40	117	20	174	160
11	42000	140x5x30x26x9H	90	142	45	125	25	204	180
12	60000	160x5x30x30x9H	100	162	45	145	25	223	190
13	83000	180x5x30x30x9H	110	182	45	165	25	237	200
14	117000	210x5x30x40x9H	125	212	45	195	25	264	215
16	160000	240x5x30x28x9H	140	242	50	220	25	285	235
17	202000	250x5x30x30x9H	150	252	50	230	30	290	250
18	244000	260x5x30x31x9H	160	262	50	240	30	303	260
19	295000	280x5x30x34x9H	170	282	50	260	30	327.5	270
20	354000	300x5x30x30x7H	180	302	50	280	30	327.5	280
21	392000	310x5x30x37x9H	190	312	60	290	40	354	310
22	450000	330x5x30x40x9H	200	332	60	310	40	354	320
23	513000	340x5x30x41x9H	200	342	60	320	40	348	320
24	592000	360x5x30x44x9H	220	362	60	340	40	368	340
25	684000	380x5x30x46x9H	230	382	60	360	40	372	350
26	763000	400x5x30x48x9H	240	402	60	380	40	382	360
27	852000	440x5x30x54x9H	250	442	60	420	40	423	370
28	950000	450x5x30x55x9H	260	452	65	430	40	428	385
29	1060000	460x5x30x56x9H	270	462	65	440	45	433	400
30	1200000	480x5x30x58x9H	285	482	65	460	45	448	415

1) 可提供GB3478渐开线花键, 如需要请联系我们  
 1) Involute splines GB3478 can be supplied, please refer to us if required

**TPB系列行星减速器** TPB series planetary gear units  
 规格9...36 Size 9...36  
**带平键实心输出轴** solid output shaft with parallel key

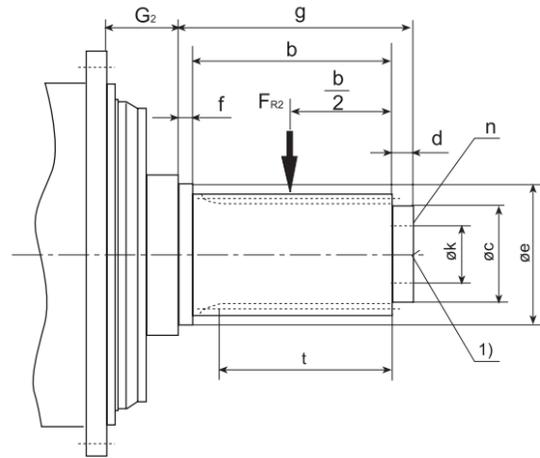


机座号 Size	输出扭矩 Output torque T <sub>2N</sub> (N.m)	实心轴 solid shaft		F <sub>R2</sub>	
		d <sub>2</sub> n <sub>6</sub>	l <sub>2</sub>		G <sub>2</sub>
9	22000	120	210	95	请咨询 Please consult us
10	31000	130	210	95	
11	42000	150	240	109	
12	60000	160	270	106	
13	83000	180	310	118	
14	117000	210	350	139	
16	160000	230	350	142	
17	202000	250	400	139	
18	244000	260	400	134	
19	295000	280	450	148.5	
20	354000	300	500	148.5	
21	392000	310	500	158	
22	450000	330	500	158	
23	513000	350	550	175	
24	592000	360	590	175	
25	684000	380	590	182	
26	763000	400	650	182	
27	852000	430	690	196.5	
28	950000	450	750	196.5	
29	1060000	460	750	209	
30	1200000	480	790	209	
31	1330000	500	790	232	
32	1500000	510	850	232	
33	1680000	530	900	251	
34	1920000	570	950	251	
35	2240000	600	1000	267	
36	2600000	640	1000	267	

1) 有关平键 (符合GB/T1096-2003) 与中心孔请参照24页:  
 1) For parallel key(GB/T1096-2003)and centre hole see page 24

**TPB系列行星减速器** TPB series planetary gear units  
 规格9...30 Size 9...30  
**渐开线花键实心输出轴** solid output shaft with involute splines

TPB...D

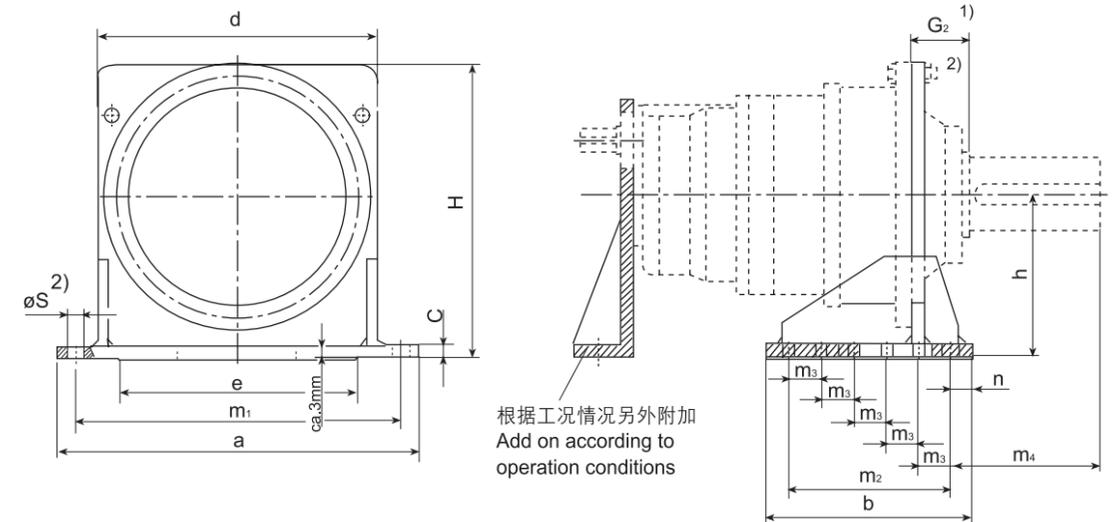


机座号 Size	输出扭矩 Output torque T <sub>2N</sub> (N.m)	渐开线花键实心输出轴 Solid output shaft with involute splines											G <sub>2</sub>	F <sub>R2</sub>
		外花键规格 outvolute splines acc.to	t	b	c k6	d	e k6	f	g	k	n	G <sub>2</sub>		
9	22000	130x5x30x24x8m	70	80	110	20	132	20	120	80	3xM16x24	95	请咨询 Please consult us	
10	31000	140x5x30x26x8m	80	90	120	20	142	20	130	90	3xM16x24	95		
11	42000	160x5x30x30x8m	90	100	140	25	162	25	150	110	3xM16x24	109		
12	60000	180x5x30x34x8m	100	110	90	25	182	25	160	130	3xM16x24	106		
13	83000	200x5x30x38x8m	110	120	100	30	202	25	175	140	3xM16x24	118		
14	117000	220x5x30x42x8m	125	135	120	30	222	30	195	160	3xM16x24	139		
16	160000	250x8x30x30x8m	140	155	140	35	252	30	220	185	3xM20x30	142		
17	202000	260x8x30x31x8m	150	165	155	40	262	35	240	200	3xM20x30	139		
18	244000	280x8x30x34x8m	160	175	170	40	282	35	250	215	3xM20x30	134		
19	295000	300x8x30x36x8m	170	185	180	40	302	35	260	225	3xM20x30	148.5		
20	354000	310x8x30x37x8m	180	195	190	40	312	35	270	235	6xM20x30	148.5		
21	392000	320x8x30x38x8m	190	205	200	40	322	35	280	250	6xM20x30	158		
22	450000	340x8x30x41x8m	200	215	210	40	342	35	290	265	6xM20x30	158		
23	513000	360x8x30x44x8m	200	215	230	40	362	35	290	275	6xM20x30	175		
24	592000	380x8x30x46x8m	220	235	245	40	382	35	310	290	6xM20x30	175		
25	684000	400x8x30x48x8m	230	245	260	40	402	35	320	310	6xM24x36	182		
26	763000	420x8x30x51x8m	240	255	280	40	422	35	330	330	6xM24x36	182		
27	852000	440x8x30x54x8m	250	265	310	40	442	35	340	370	6xM24x36	196.5		
28	950000	450x8x30x55x8m	260	275	330	45	452	40	360	380	6xM24x36	196.5		
29	106000	460x8x30x56x8m	270	285	340	45	462	40	370	390	6xM24x36	209		
30	120000	480x8x30x58x8m	285	300	360	45	482	40	385	410	6xM24x36	209		

1)有关花键 (符合GB/T1096-2003)与中心孔请参照24页;  
 2)可提供GB3478渐开线花键, 如需要请联系我们

1)For parallel key(GB/T1096-2003)and centre hole see page 24;  
 2)Involute splines GB3478 can be supplied,please refer to us if required

**TPB系列行星减速器** TPB series planetary gear units  
 附件 add-on piece  
**减速器底座** Gear housing base

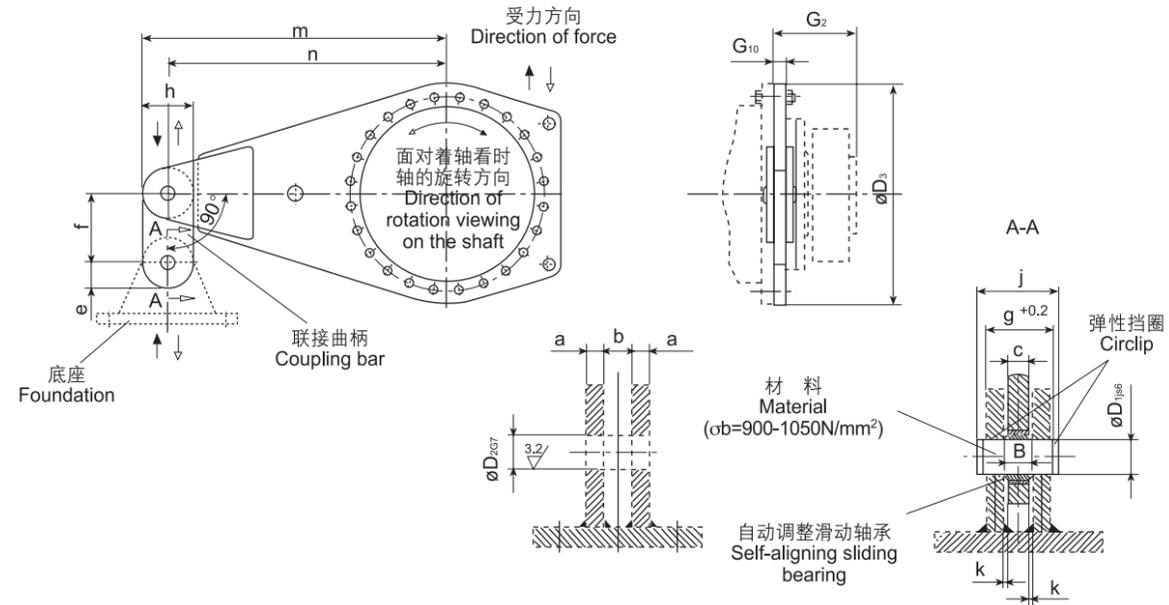


机座号 Size	尺寸 Dimensions											螺栓孔 Foundation bolt s	数量 Qty.	重量 Weight	
	a	b	c	d	e	h	H	m1	m2	m3	m4				n
9	580	330	20	450	380	260	480	520	260	130	240	35	26	2x3	56
10	630	360	25	500	430	280	525	570	290	145	240	35	26	2x3	82
11	680	400	30	550	480	315	585	620	330	110	274	35	26	2x4	122
12	760	450	30	630	560	360	670	700	380	95	292	35	26	2x5	157
13	820	490	35	680	610	390	720	750	420	105	334	35	26	2x5	213
14	920	560	35	760	680	430	800	840	480	120	380	40	33	2x5	270
16	980	580	40	820	700	470	865	900	500	125	374	40	33	2x5	350
17	1130	670	45	940	810	540	998	1040	580	145	405	45	39	2x5	520
18	1180	720	45	980	830	560	1035	1080	620	155	385	50	39	2x5	580
19	1260	760	50	1050	880	590	1090	1160	640	160	450	60	45	2x5	720
20	1260	760	50	1050	880	590	1090	1160	640	160	500	60	45	2x5	720
21	1440	840	55	1170	1020	660	1228	1160	700	175	513	70	52	2x5	940
22	1440	840	55	1170	1020	660	1228	1320	700	175	513	70	52	2x5	940
23	1540	910	60	1270	1100	730	1345	1320	750	150	567	80	52	2x6	1275
24	1540	910	60	1270	1100	730	1345	1420	750	150	607	80	52	2x6	1275
25	1700	1000	65	1400	1240	795	1465	1420	860	215	574	70	62	2x5	1670
26	1700	1000	65	1400	1240	795	1465	1550	860	215	634	70	62	2x5	1670
27	1850	1100	70	1550	1370	870	1610	1700	950	190	664	75	62	2x6	2170
28	1850	1100	70	1550	1370	870	1610	1700	950	190	724	75	62	2x6	2170
29	1980	1180	75	1640	1460	925	1715	1820	1000	250	731	90	70	2x5	2650
30	1980	1180	75	1640	1460	925	1715	1820	1000	250	771	90	70	2x5	2650
31	2150	1300	75	1750	1570	1000	1845	1950	1100	220	773	100	70	2x6	3100
32	2150	1300	75	1750	1570	1000	1845	1950	1100	220	833	100	70	2x6	3100
33	2230	1350	85	1850	1630	1050	1940	2050	1150	230	883	100	78	2x6	3850
34	2230	1350	85	1850	1630	1050	1940	2050	1150	230	933	100	78	2x6	3850
35+36	根据用户要求供货 On request														

1)输出轴的尺寸, 见30页  
 2)见36页

1)For output shaft dimintions,see page 30  
 2)see page 36

**TPB系列行星减速器** TPB series planetary gear units  
**附件** add-on piece  
**单侧扭矩支撑臂** Torque reaction arm on one side

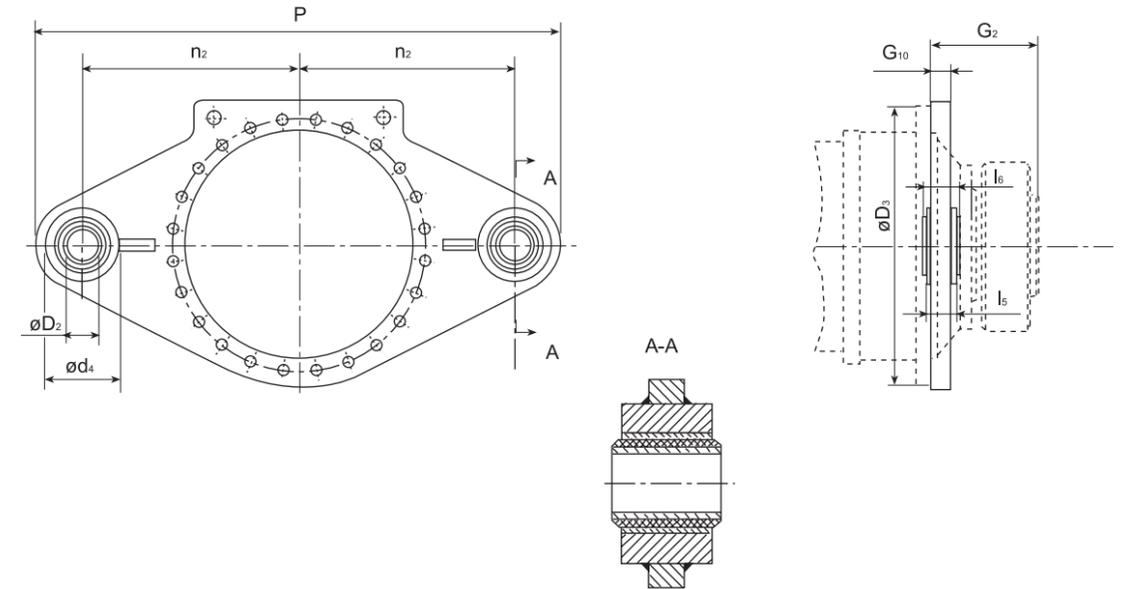


尺寸		Dimensions																		
机座号 Size	输出扭矩 Output torque $T_{2N}$ (N.m)	$D_1$ js6	$D_2$ G7	$D_3$	$G_2$	$G_{10}$	a min	b	B 1)	C	e	f	g +0.2	h	j	间隙 Clearance k	m	n	滑动轴承 内径 Sliding bearing	重量 Weight
9	22000	30	440	165	25	15	25	22	18	50	140	59.5	100	70	3.5	605	555	30	38	
10	31000	35	485	174	30	15	30	25	20	52.5	140	64.5	105	75	5	667.5	615	35	51	
11	42000	40	540	204	30	18	30	28	22	65	160	70.5	130	85	4	750	685	40	82	
12	60000	40	620	224	30	18	30	28	22	65	160	70.5	130	85	4	850	785	40	85	
13	83000	45	665	241	35	20	35	32	25	72.5	180	79.5	145	95	5	912.5	840	45	113	
14	117000	50	740	278	40	20	40	35	30	72.5	200	85	145	100	5	1012.5	940	50	145	
16	160000	60	790	285	50	25	50	44	35	77.5	240	105	155	120	7.5	1077.5	1000	60	206	
17	202000	60	915	294	50	25	50	44	35	85	240	105	170	120	7.5	1250	1165	60	274	
18	244000	70	955	303	55	30	55	49	40	105	280	120	210	135	7.5	1315	1210	70	365	
19	295000	80	1005	327.5	60	30	60	55	45	105	320	125	210	145	7.5	1405	1300	80	423	
20	354000	80	1005	327.5	60	30	60	55	45	105	320	125	210	145	7.5	1405	1300	80	423	
21	392000	80	1140	354	60	30	60	55	45	113	320	125	225	145	7.5	1562.5	1450	80	530	
22	450000	80	1140	354	60	30	60	55	45	113	320	125	225	145	7.5	1562.5	1450	80	530	
23	513000	90	1235	380	65	30	65	60	50	125	360	130	250	150	7.5	1700	1575	90	665	
24	592000	90	1235	380	65	30	65	60	50	125	360	130	250	150	7.5	1700	1575	90	665	
25	684000	100	1350	407	75	35	75	70	55	138	400	150	275	170	10	1857.5	1720	100	940	
26	763000	100	1350	407	75	35	75	70	55	138	400	150	275	170	10	1857.5	1720	100	940	
27	852000	110	1490	453	75	35	75	70	55	150	440	150	300	175	10	2050	1900	110	1120	
28	950000	110	1490	453	75	35	75	70	55	150	440	150	300	175	10	2050	1900	110	1120	
29	1060000	110	1600	483	75	35	75	70	55	158	440	150	315	175	10	2192.5	2035	110	1260	
30	1200000	110	1600	483	75	35	75	70	55	158	440	150	315	175	10	2192.5	2035	110	1260	
31~36	根据用户要求供货 On request																			

1) 公称尺寸B=22-35,公差-0.12  
 公称尺寸B=44-55,公差-0.15  
 公称尺寸B=60-70,公差-0.20

1) Nominal size B=22-35, tolerance-0.12  
 Nominal size B=44-55, tolerance-0.15  
 Nominal size B=60-70, tolerance-0.20

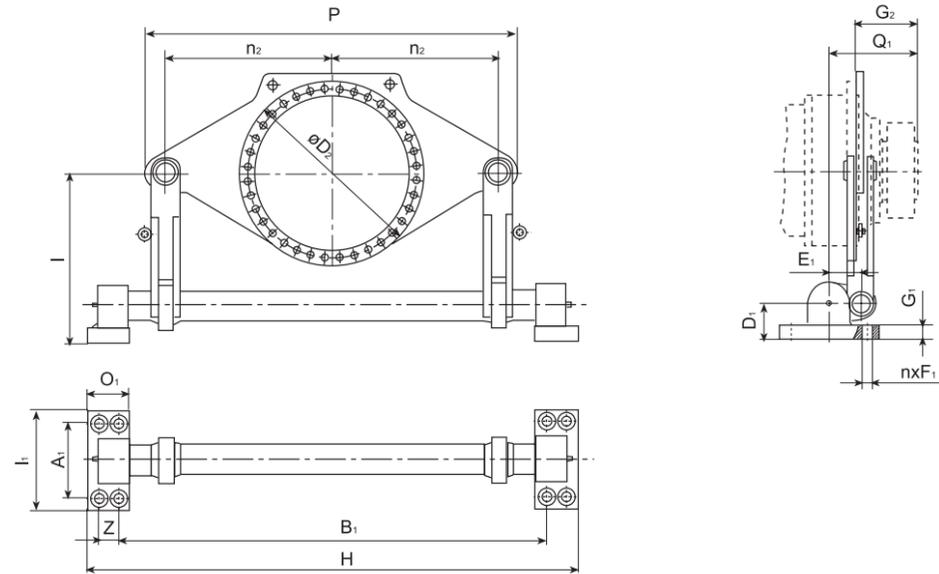
**TPB系列行星减速器** TPB series planetary gear units  
**附件** add-on piece  
**带橡胶衬套的两侧扭矩支撑臂** Torque reaction arm on two sides with rubber bushes



机座号 Size	输出扭矩 Output torque $T_{2N}$ (N.m)	$D_2$ H9	$D_3$	$d_4$	$G_2$	$G_{10}$	$l_5$	$l_6$	$n_2$	P	重量 Weight
9	22000	50	440	115	165	30	100	110	500	1140	58
10	31000	50	485	115	174	30	100	110	550	1240	72
11	42000	100	540	180	204	30	110	120	575	1355	95
12	60000	100	620	180	224	35	110	120	625	1455	120
13	83000	110	665	210	241	35	170	180	600	1435	145
14	117000	110	740	210	278	40	170	180	650	1535	170
16	160000	124	790	240	285	40	220	230	700	1670	230
17	202000	124	915	240	288	40	220	230	750	1770	300
18	244000	124	955	240	303	50	220	230	900	2070	400

\*) 销轴:  $\phi 8$  \*) Pin:  $\phi 8$

**TPB系列行星减速器** TPB series planetary gear units  
**附件** add-on piece  
**扭力轴支撑架** Torque shaft support

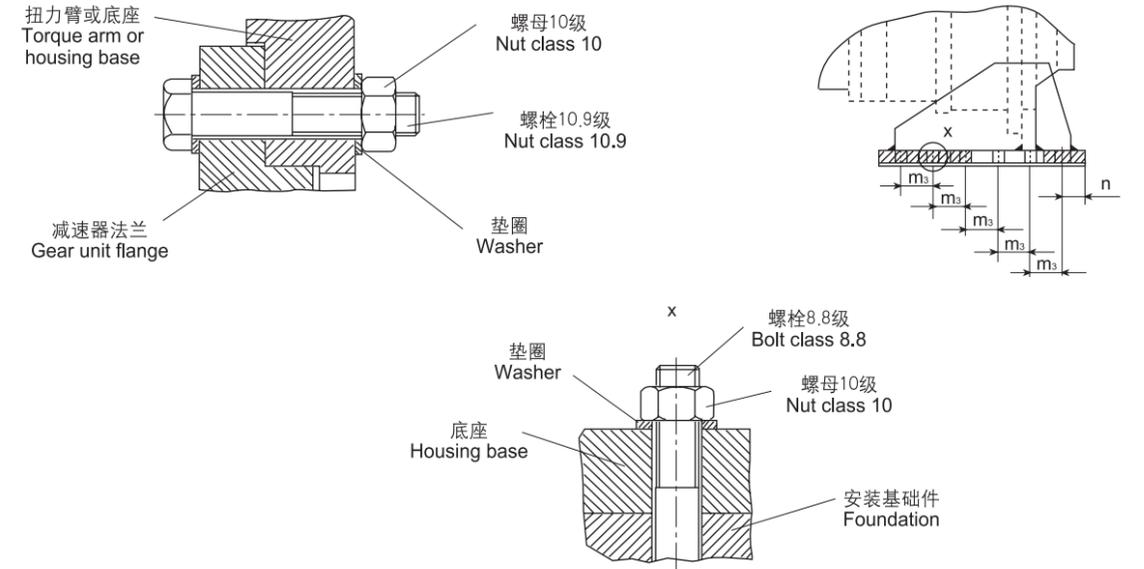


机座号 Size	输出扭矩 Output torque T <sub>2N</sub> (N.m)	A <sub>1</sub>	B <sub>1</sub>	D <sub>3</sub>	D <sub>1</sub>	E <sub>1</sub>	F <sub>1</sub> (2)	数量 Qty. n	G <sub>1</sub>	G <sub>2</sub>	H	b	l <sub>1</sub>	n <sub>2</sub>	O <sub>1</sub>	P	Q <sub>1</sub>	Z	重量 Weight	
9	22000	250	1414	610	120	105	33	8	48.5	165	1619	560	330	550	140	1230	247.5	65	300	
10	31000	250	1414	610	120	105	33	8	48.5	174	1619	560	330	550	140	1230	256.5	65	300	
11	42000	250	1414	610	120	105	33	8	48.5	204	1619	560	330	550	140	1230	286.5	65	300	
12	60000	250	1414	610	120	105	33	8	48.5	224	1619	560	330	550	140	1230	306.5	65	300	
13	83000	280	1604	775	155	145	39	8	68.5	241	1837	620	380	650	158	1450	358.5	75	600	
14	117000	280	1604	775	155	145	39	8	68.5	278	1837	620	380	650	158	1450	395.5	75	600	
16	160000	280	1604	775	155	145	39	8	68.5	285	1837	620	380	650	158	1450	402.5	75	600	
17	202000	315	1777	955	170	165	39	8	73.5	294	2041	700	400	750	180	1680	431.5	84	900	
18	244000	315	1777	955	170	165	39	8	73.5	303	2041	700	400	750	180	1680	440.5	84	900	
19	295000	350	2000	985	195	175	45	8	83.5	328	2300	860	450	850	200	1900	470.5	100	1400	
20	354000	350	2000	985	195	175	45	8	83.5	328	2300	860	450	850	200	1900	470.5	100	1400	
21	392000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1700	
22	450000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1700	
23	513000	450	2496	1215	235	220	45	8	98.5	380	2871	1060	590	1063	250	2385	562.5	125	2150	
24	592000	450	2496	1215	235	220	45	8	98.5	380	2871	1060	590	1063	250	2385	562.5	125	2150	
25	684000	500	2816	1350	275	245	52	8	118.5	407	3236	1200	650	1150	280	2600	614.5	140	2700	
26	763000	500	2816	1350	275	245	52	8	118.5	407	3236	1200	650	1150	280	2600	614.5	140	2700	
27	852000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3400	
28	950000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3400	
29	1060000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	4350	
30	1200000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	4350	
31	1330000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5500	
32	1500000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5500	
33	1680000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	7000	
34	1920000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	7000	
35~36																				根据用户要求供货 On request

1)标准尺寸,整体高度可修正到2000mm  
 2)锁紧用螺栓强度不得低于6.8级

**TPB系列行星减速器**  
**法兰联接及底座安装的螺母预紧扭矩**

TPB series planetary gear units  
**Tightening torques for flange connections  
 and foot-mounted design**

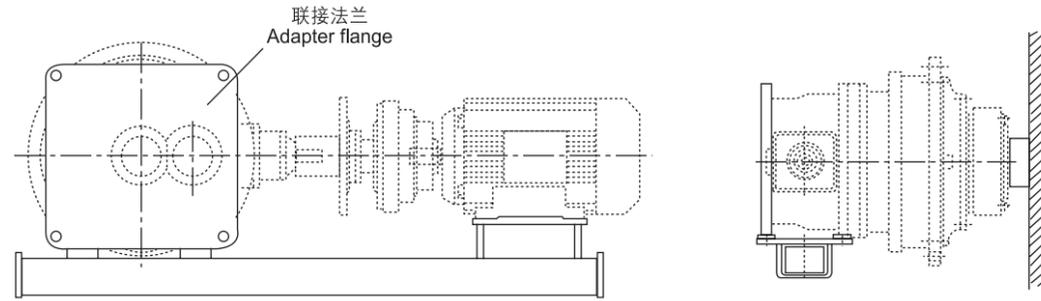


机座号 Size	法兰联接 Flange attachment		底座联接 Base attachment	
	螺栓Thread (10.9)	预紧扭矩(N.m) Tightening torque	螺栓Thread (8.8)	预紧扭矩(N.m) Tightening torque
9	M16	295	M24	710
10	M16	295	M24	710
11	M20	580	M24	710
12	M24	1000	M24	710
13	M24	1000	M24	710
14	M24	1000	M30	1450
16	M24	1000	M30	1450
17	M30	2000	M36	2530
18	M30	2000	M36	2530
19/20	M30	2000	M42	4070
21/22	M36	3560	M48	6140
23/24	M36	3560	M48	6140
25/26	M42	5720	M56	9840
27/28	M48	8640	M56	9840
29/30	M48	8640	M64	14300
31/32	M56	13580	M64	14300
33/34	M56	13580	M64	14300
35/36	M56	13580	M72x6	20800

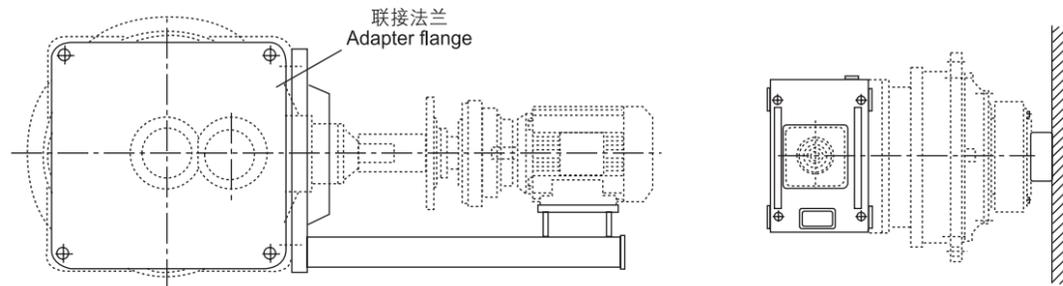
1)Standard dimension,overall height modifiable up to 2000mm  
 2)The bolts used for lock are not lower than class 6.8

**TPB系列行星减速器** TPB series planetary gear units  
**电机安装支架** Motor bracket

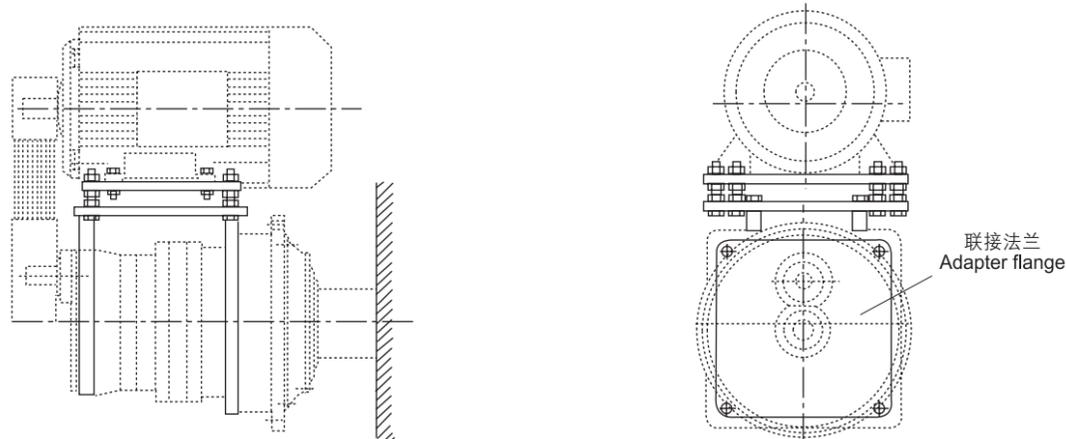
电机安装支架 (附件代号-71)  
Motor bracket(code of add-on piece-71)



电机安装支架 (附件代号-71)  
Motor bracket(code of add-on piece-71)

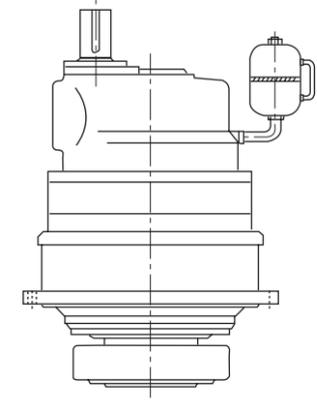
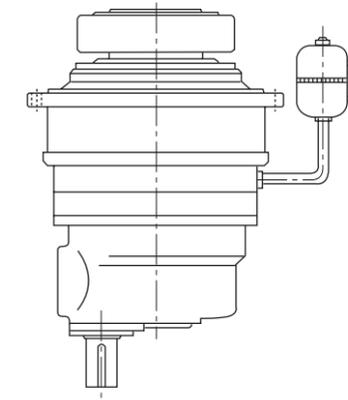


电机安装支架 (附件代号-72)  
Motor bracket(code of add-on piece-72)



如果不用钟形电机支座，可以采用法兰联接的电机支架，如上图所示。  
In cases where no motor brackets,they are shown in the above drawings.

**TPB系列行星减速器** TPB series planetary gear units  
**立式安装补偿油箱** Oil compensating tank for  
Vertical mounting position



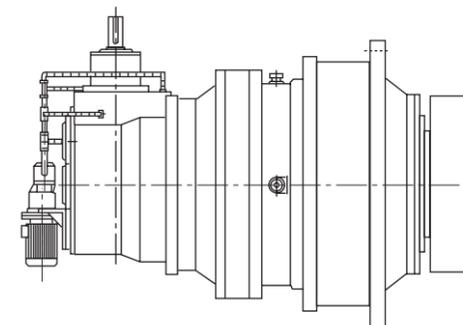
立式安装时，为保证上端的轴承得到可靠润滑必须相应的提高油位，油位通过加装的补偿油箱来加高和检查。补偿油箱上装有通气孔器，如上图所示。

油箱可安装在减速器上，也可安装在客户的机器上。

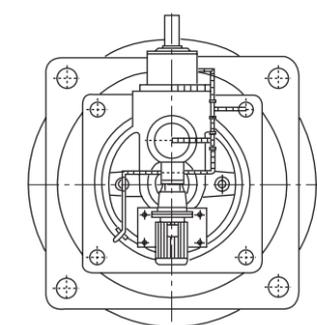
In case of vertical mounting position, to ensure th lubrication of the upper bearing,the oil level is increased accordingly,the oil level is increased and checked via an oil compensating tank fitted separately.

The oil tank can be attached either to the gear units,or to the customer's machine frame.

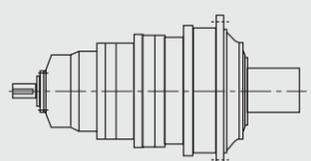
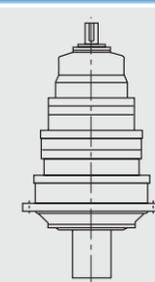
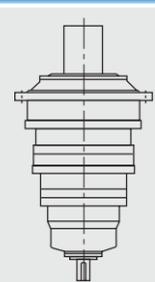
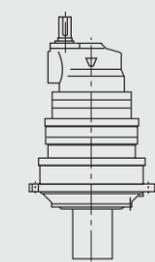
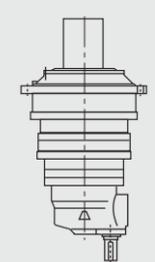
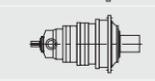
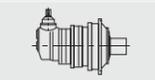
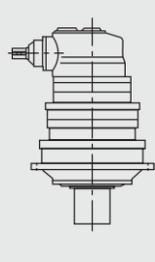
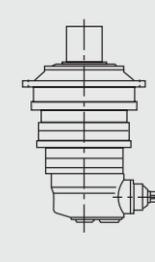
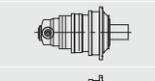
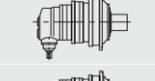
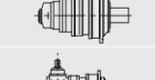
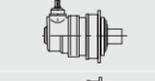
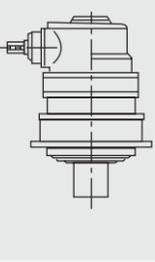
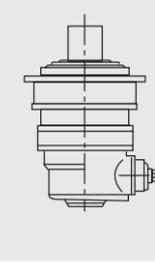
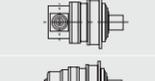
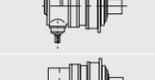
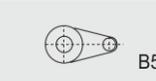
当安装布置方位为B511、B521、B531的卧式安装时需配备电动油泵强制润滑，如下图所示：



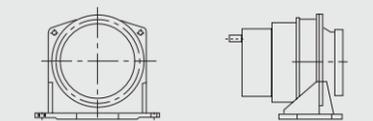
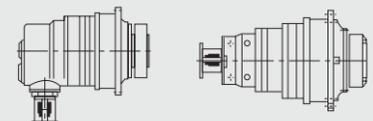
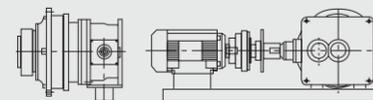
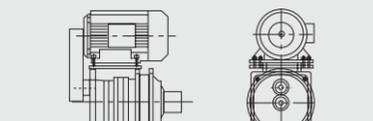
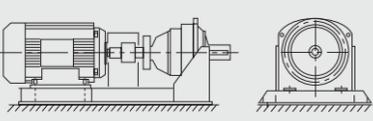
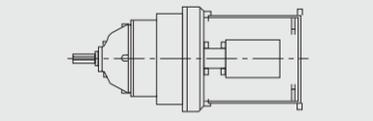
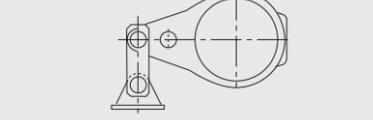
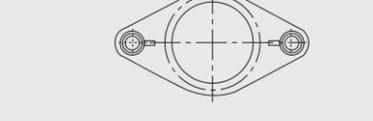
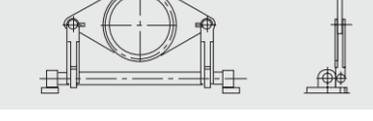
In case of mounting positions B511、B521、B531,horizontal, it needs to mount the motor pumps for forced lubrication, it's shown in the following drawings:



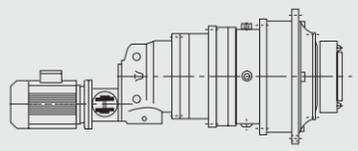
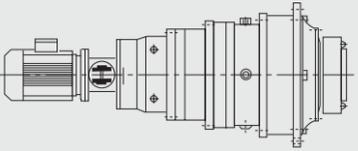
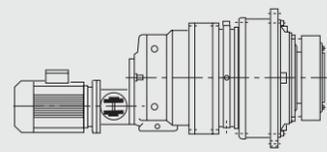
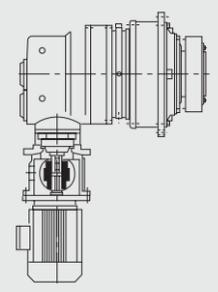
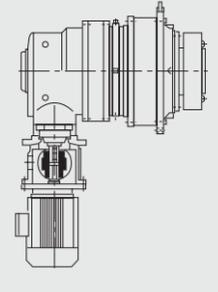
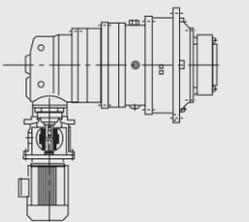
## TPB系列行星减速器 TPB series planetary gear units 安装布置形式 Mounting position

		水平安装 Horizontal gear unit position		立式安装 Vertical gear unit position	
同轴式行星减速器 Coaxial planetary gear units	0	TPB.N.	 B500	 V100	 V300
斜齿轮行星减速器 Combined helical gear planetary gear units	1	TPB.S.	 B511	 V110	 V310
			 B512		
			 B513		
			 B514		
锥齿轮-斜齿轮-行星减速器 Combined bevel gear planetary gear units	2	TPB.K.	 B521	 V120	 V320
			 B522		
			 B523		
			 B524		
锥齿轮行星减速器 Combined bevel-helical gear planetary gear units	3	TPB.L.	 B531	 V130	 V330
			 B532		
			 B533		
			 B534		
扭矩支撑臂 Torque reaction arm	4		 B551	 B552	1) 请注意B5*1、V1**、V3**安装布置形式时润滑方面有特殊要求。 1) Please notice that there are special requirements in lubrication when mounting positions B5*1、V1**、V3**
			 B553	 B554	
			 B555	 B556	

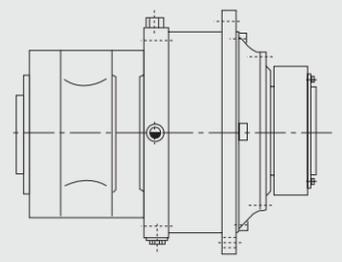
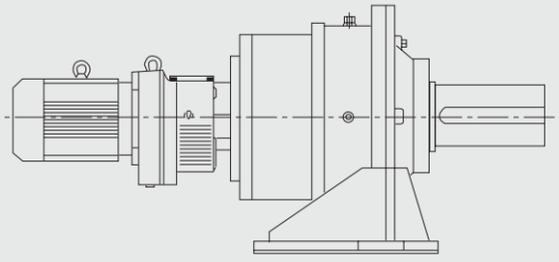
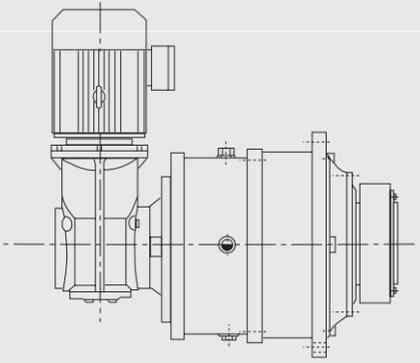
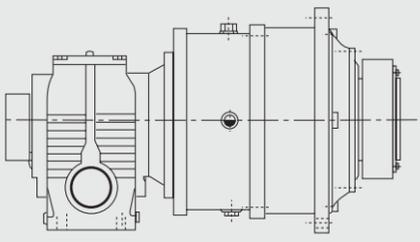
## TPB系列行星减速器 TPB series planetary gear units 附件 Add-on piece

代号 Code	附件 Add-on piece		示例 Representation
99	无附件 Without add-on piece		
96	减速器底座 Gear housing base	见32页 See page 32	
70	电机钟形支座 Motor bell housing	见42页 See page 42	
71	电机托架 Motor bracket	见37页 See page 37	
72	电机支架 Motor bracket	见37页 See page 37	
73	摆动底座 Motor swing-base		
74	钟形支座 (输出) Bell housing(output)		
75	扭矩支撑臂 (一端) Torque reaction arm(on one side)	见33页 See page 33	
76	扭矩支撑臂 (二端) Torque reaction arm(on two side)	见34页 See page 34	
77	扭矩轴支撑臂 Torsion shaft support	见35页 See page 35	

**TPB系列行星减速器** TPB series planetary gear units  
**电机、减速器直联方式** Connection-directly Mode of motor and gear unit

安装布置形式 Mounting position	类型 Type	图示 Representation
水平安装 Horizontal	TPB2S电机直联 TPB2S motor connect-directly	
水平安装 Horizontal	TPB3N电机直联 TPB3N motor connect-directly	
水平安装 Horizontal	TPB3S电机直联 TPB3S motor connect-directly	
水平安装 Horizontal	TPB2K电机直联 TPB2K motor connect-directly	
水平安装 Horizontal	TPB2L电机直联 TPB2L motor connect-directly	
水平安装 Horizontal	TPB2K电机直联 TPB2K motor connect-directly	

**TPB系列行星减速器** TPB series planetary gear units  
**减速器组合例子** Examples of Combinations

组合形式说明 Identifications of combinations	例子 Example
单级空心轴行星减速器 带液压马达 Two stages solid shaft planetary gear units with hydraulic motor	
两级实心轴行星减速器 带R斜齿轮减速机、电机和底座 Two stages solid shaft planetary gear units with R helical gear units、motor and housing base	
两级空心轴行星减速器 带K锥齿轮减速机、电机 Two stages hollow shaft planetary gear units with K helical-bevel gear units、motor	
两级空心轴行星减速器 带S蜗轮蜗杆减速机、电机 Two stages hollow shaft planetary gear units with S helical-worm gear units、motor	

详情请与我们联系 Please refer to us for the details

## TPB系列行星减速器 减速器润滑

TPB series planetary gear units  
Gear units lubrication

### 润滑油种类选择

减速器使用工况	润滑油种类
冶金轧钢、井下采掘、 高温有冲击、含水等	L-CKD重载荷工业齿轮 油(GB5903-1995)
其余工况	L-CKC重载荷工业齿轮 油(GB5903-1995)

注:若选用合成齿轮油则更具有良好的抗老化性能,  
可有效地提高减速器的机械效率。

### 润滑油粘度

条件	润滑油粘度等级40℃温度下的ISO- VG粘度mm <sup>2</sup> /s(cst)
高速级圆周速度V<2.5m/s, 或环境温度在35-50℃之间	VG320(或VG460)
高速级圆周速度V<2.5m/s, 或环境温度在35℃以下 或采用循环油润滑	VG220

### 浸油润滑油的工作温度

润滑油种类	工作温度/℃
中载荷工业齿轮油L-CKC	-8℃至+90℃(瞬时可达100℃)
重载荷工业齿轮油L-CKD	-5℃至+100℃(瞬时可达110℃)

注意:如果减速器的工作温度高于或低于表中规定极限值  
则应重新确定合适的润滑油。  
当环境温度低于0℃时启动前油温需加热到0℃以上

### 强制润滑油允许的极限温度

40℃温度下的ISO-VG 粘度mm <sup>2</sup> /s(cst)	强制润滑允许的极限温度/℃	
	矿物油	合成油
VG220	10-80	0-90
VG320	15-90	5-100
VG460	20-95	10-105

注意:当油温低于表中所列数值时,必须提供浸油润滑方  
式,或对润滑油加热。

### Lubricant selection

Operating konditions of gear units	Lubricant specification
Steel rolling,excavating,high temperature with shock,moisture,etc	L-CKD heavy load industrial gear oil(GB5903-1995)
others	L-CKC moderate load indu- -strial gear oil(GB5903-1995)

Note:It adopts the synthetic oil which has the better performance  
of anti-ageing so that improves the mecharical efficiency effectively.

### Lubricant Viscosity

Conditions	Lubricant viscosity classification Viscosity ISO-VG at 40℃in mm <sup>2</sup> /s(cst)
Rotation velocity of high speed stage V<2.5m/s,or ambient temperature between35-50℃	VG320(or VG460)
Rotation velocity of high speed stage V<2.5m/s,or ambient temperature at 35℃,or lubrication with circulating oil	VG220

### Lubricant selection

Lubricant specification	Working temperature/℃
L-CKC moderate load industrial gear oil	from-8℃to +90℃(up to 100℃ at moment)
L-CKD heavy load industrial gear oil	from-5℃to +100℃(up to 110℃ at moment)

Note:If the temperatures of gear units are above or below the values as  
listed in table, it determines the proper oil again.  
if the ambient temperatures are below 0℃,the oil has to be heated  
above 0℃

### Permissible temperature limit for forced feed lubrication

Viscosity ISO-VG at 40℃inmm <sup>2</sup> /s(cat)	Permissible temperature limit for forced feed lubrication/℃	
	Mineral oil	Synthetic oil
VG220	10-80	0-90
VG320	15-90	5-100
VG460	20-95	10-105

Note:If the temperatures are below the values as listed in table,dip  
lubrication has to be proeided or the oil must be heated.

## 风力发电机变桨偏航用齿轮箱



TXNS1.5、RNS3锥齿轮行星齿轮减速器

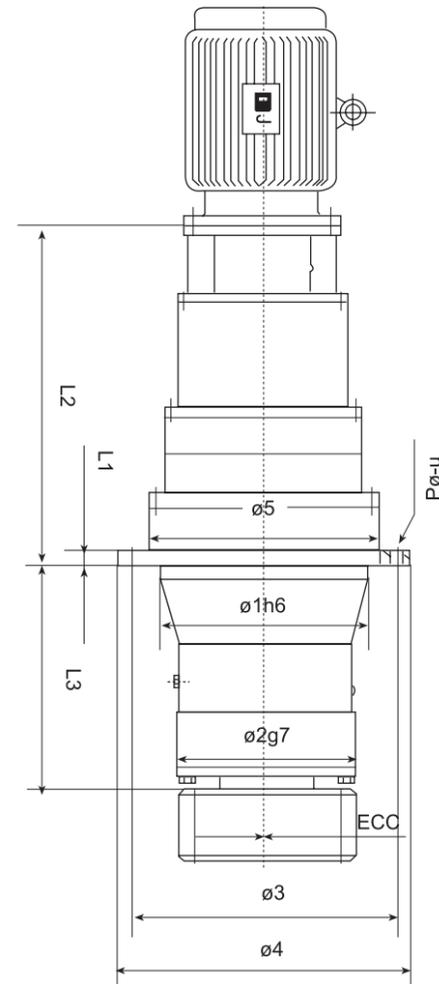
技术参数/Technical parameter

型号 Type	额定输出扭矩(N.m) Nominal output Torque	尖峰输出扭矩(N.m) Peak output Torque	速比范围 Range of ratios
TXFJ102	5000	12000	70~250
TXFJ103	8000	15000	70~250
TXFJ205	35000	90000	500~2000
TXFJ206	55000	110000	500~2000

外形尺寸/Outline Dimensions

型号 Type	ø1	ø2	ø3	ø4	ø5	n	d	L1	L2	L3	重量 Weight
TXFJ102	278	228	350	380	313	16	18	30	287	302	190
TXFJ103	290	250	325	363	-	18	17	96	307	233	260
TXFJ205	365	-	400	437	437	24	22	35	588	89	480
TXFJ206	400	340	510	560	445	22	24	30	650	430	500

注:1.输出齿轮与ECC数据按客户要求; 2.重量不包括电机  
Note:1.Pinion and Ecc.data on request;2.Not including weight of motor



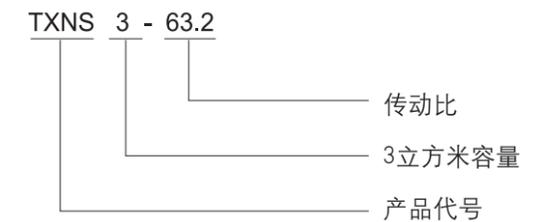
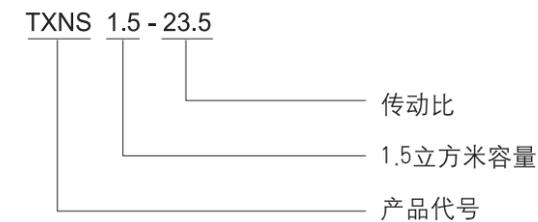
一、概述

本产品吸取了德国、意大利同类产品的特点，经优化设计而成；具有体积小、重量轻、承载能力大等优点，广泛应用于建筑行业的混凝土搅拌机，及其他类似的搅拌机械中。

二、适用范围

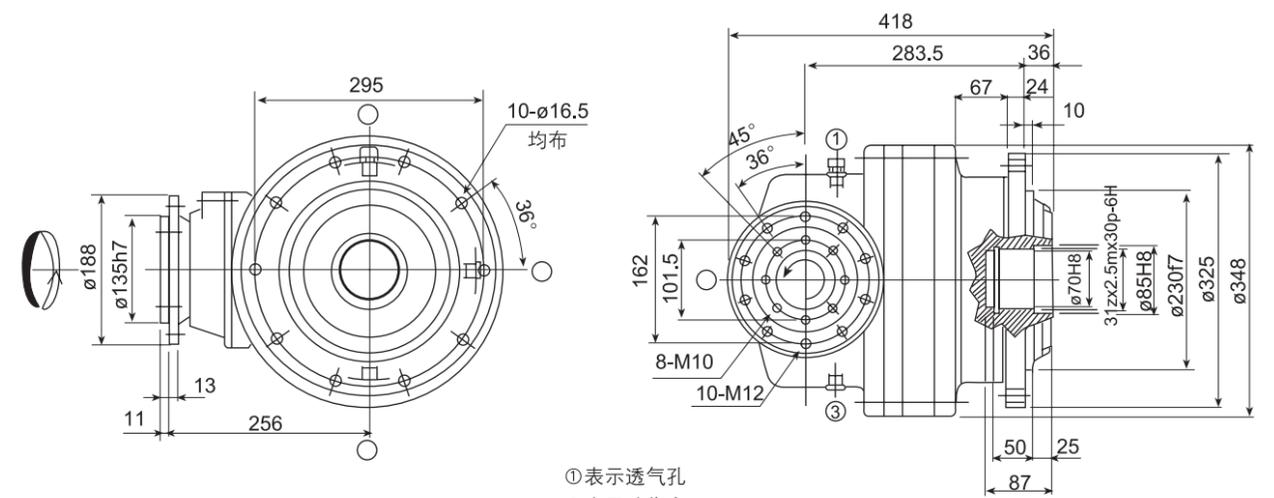
高速轴最高转速不超过1500r/min  
工作环境温度为-40℃ ~ 45℃

三、型号与标记



四、TXNS1.5-23.5锥齿轮行星齿轮减速器型式与尺寸见图一

五、TXNS3-63.2锥齿轮行星齿轮减速器型式与尺寸见图二



①表示透气孔  
②表示油位塞  
③表示放油孔

图一

TXJSR15、TXSR30锥齿轮行星齿轮减速器

一、概述

本产品与TXNS1.5、TXNS3.0结构型式、特点、适用范围基本相同，下面以图表型式说明其不同之处。

二、型号与标记

TXJSR 1.5-23.5

传动比

1.5立方米容量

产品代号

TXJSR 30-27

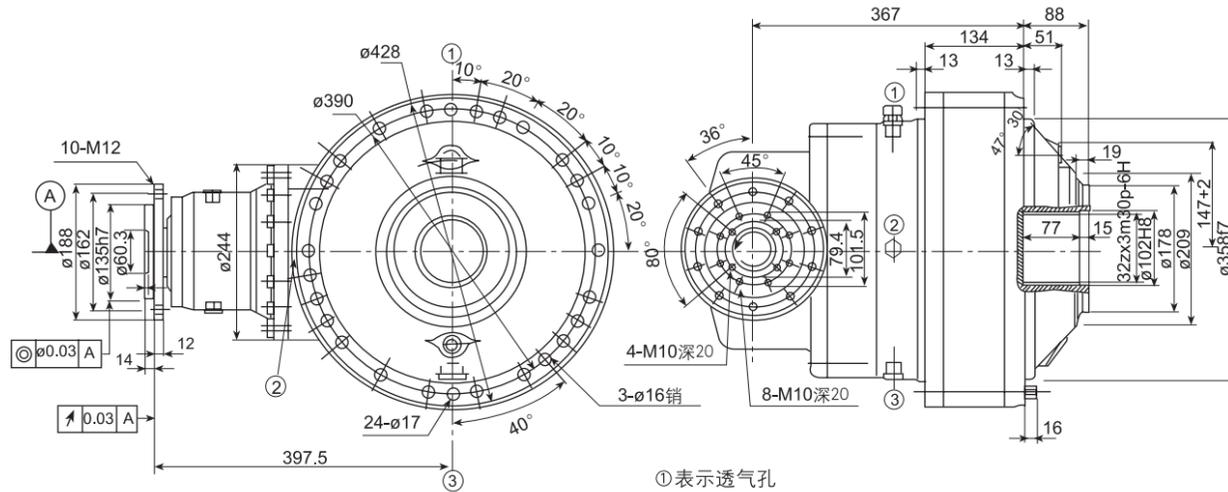
传动比

3立方米容量

产品代号

三、TXJSR15-27锥齿轮行星齿轮减速器型式与尺寸见图三

四、TXJSR30-27锥齿轮行星齿轮减速器型式与尺寸见图四



①表示透气孔  
②表示油位塞  
③表示放油孔

图二

六、承载能力

TXNS1.5-23.5锥齿轮行星齿轮减速器额定输出扭矩为12500 N.m

TXNS3-63.5锥齿轮行星齿轮减速器额定输出扭矩为35000 N.m

七、使用维护

(1)减速器应安装牢固，防止振动。安装时，认真调整输出、输入与主机连接的同轴度和平行度；

(2)安装好后，必须注入所需润滑油，油面达到规定的高度。润滑油可选用GB/T5903中的L-CKC100、L-CKC150、LCKC220 (原N100、N150、N220)及其他性能相当或更好的润滑油；

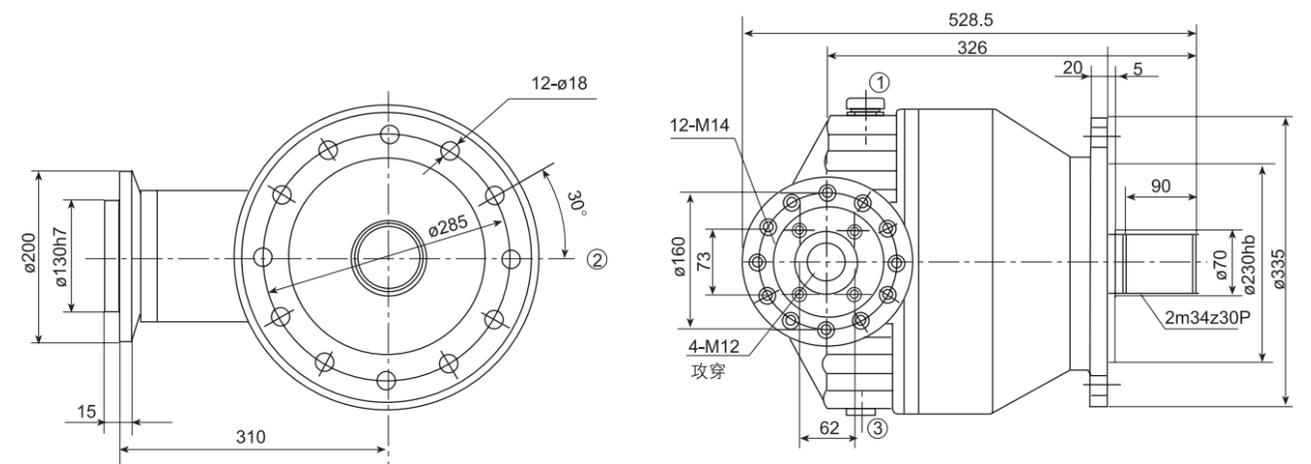
(3)在正式使用前，用手转动，减速器必须灵活、无卡滞现象，然后进行空载运转，时间不得少于2h，运转平稳、无冲击、振动及漏油现象；

(4)新减速器第一次使用一个月后，必须更换新润滑油，在以后使用中应定期检查油的质量。发现老化变质及时更换，同时经常检查油面高度时，及时补足。对长期连续工作的减速器必须三个月换油一次，对每天工作不超过八小时的减速器，须六个月换油一次；

(5)减速器不允许长时间超负荷运转，短时尖峰负荷不大于额定负荷的2倍；

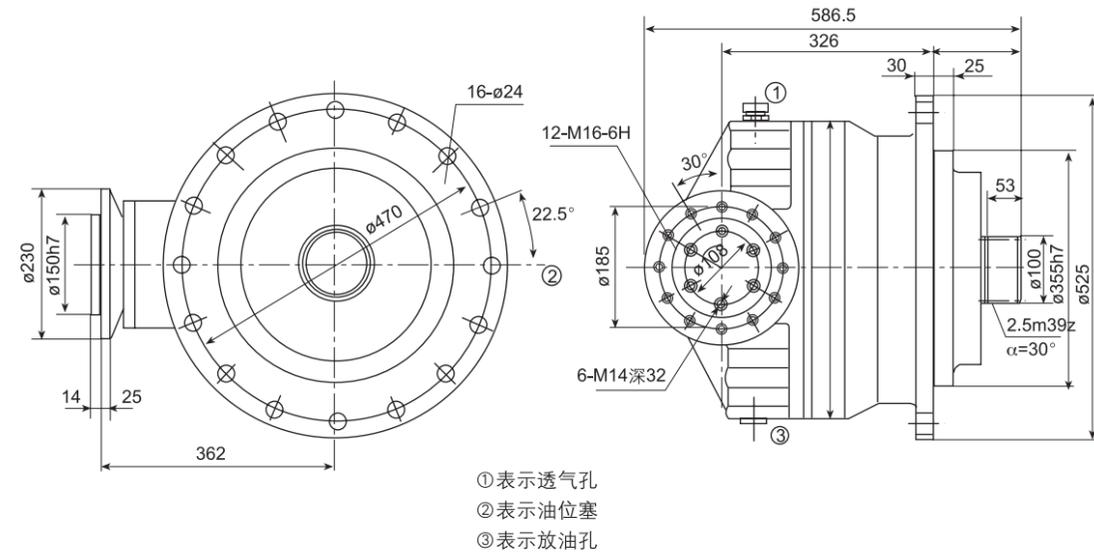
(6)避免频繁满负荷起动，可提高减速寿命；

(7)在使用中，若发现油温显著升高，温升超过60℃或油温超过85℃时，以及产生不正常的噪音时，应停止使用，检查原因，即使排除故障，更换润滑油后再使用。



①表示透气孔  
②表示油位塞  
③表示放油孔

图三



图四

#### 四、承载能力

TXJSR15锥齿轮行星齿轮减速器额定输出扭矩为11250 N.m

TXJSR30锥齿轮行星齿轮减速器额定输出扭矩为31500 N.m

#### 七、使用维护

(1) 减速器应安装牢固，防止振动。安装时，认真调整输出、输入与主机连接的同轴度和平行度；

(2) 安装好后，必须注入所需润滑油，油面达到规定的高度。润滑油可选用GB/T5903中的L-CKC100、L-CKC150、LCKC220 (原N100、N150、N220)及其他性能相当或更好的润滑油；

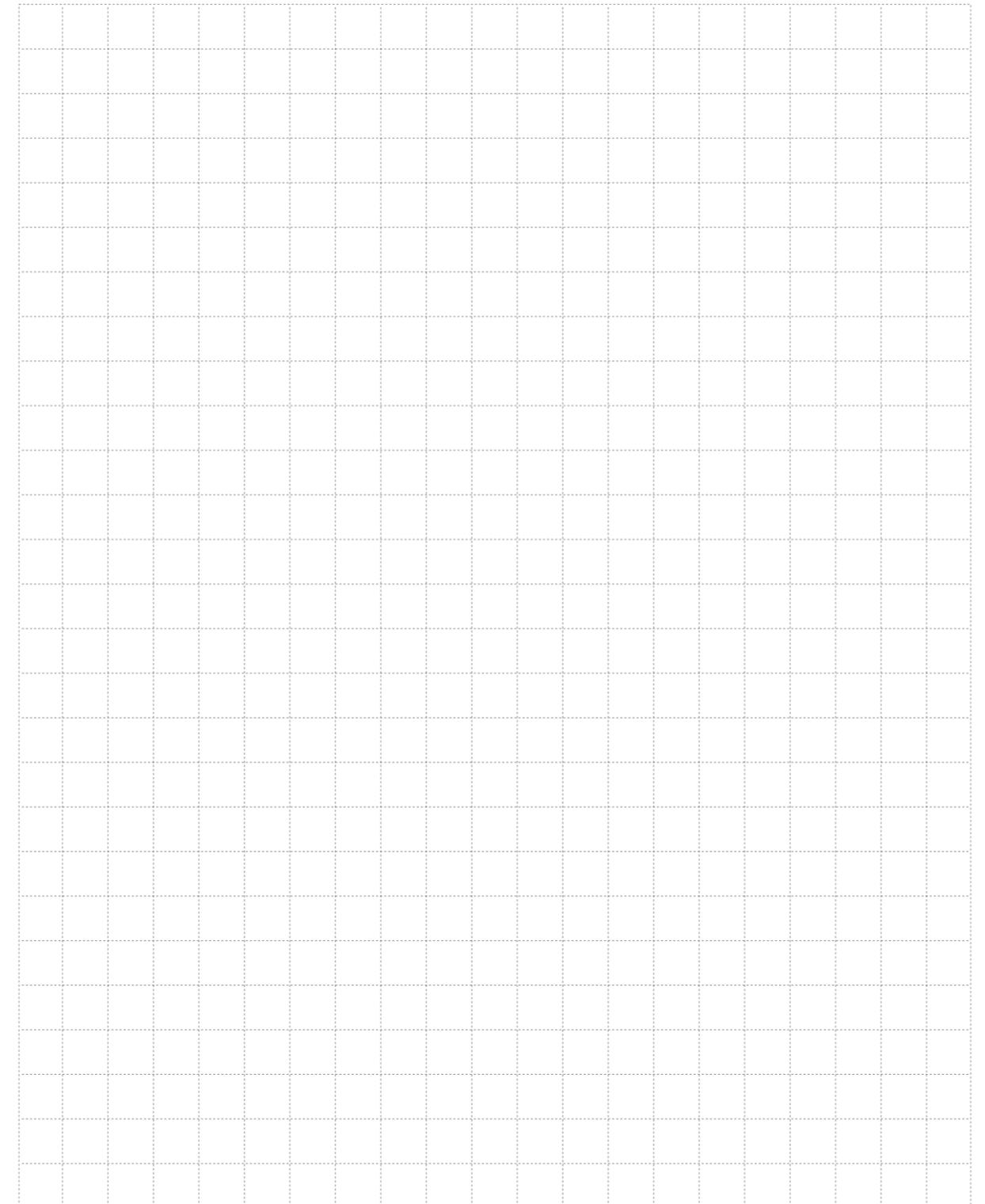
(3) 在正式使用前，用手转动，减速器必须灵活、无卡滞现象，然后进行空载运转，时间不得少于2h，运转平稳、无冲击、振动及漏油现象；

(4) 新减速器第一次使用一个月后，必须更换新润滑油，在以后使用中应定期检查油的质量。发现老化变质及时更换，同时经常检查油面高度时，及时补足。对长期连续工作的减速器必须三个月换油一次，对每天工作不超过八小时的减速器，须六个月换油一次；

(5) 减速器不允许长时间超负荷运转，短时尖峰负荷不大于额定负荷的2倍；

(6) 避免频繁满负荷起动，可提高减速寿命；

(7) 在使用中，若发现油温显著升高，温升超过60℃或油温超过85℃时，以及产生不正常的噪音时，应停止使用，检查原因，即使排除故障，更换润滑油后再使用。



本厂拥有对本说明书的解释权，如有疑问请与本厂技术部门联系。一般每年一版，选用时请以最新版本为准。

The manufacturer has the right to interpret this instruction book, and any questions may refer to our technical department. This instruction book is updated every year, so the latest edition should be identified for reference.

