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### 1.3 基本类型概述

### Summary of Basic Types

两级行星齿轮

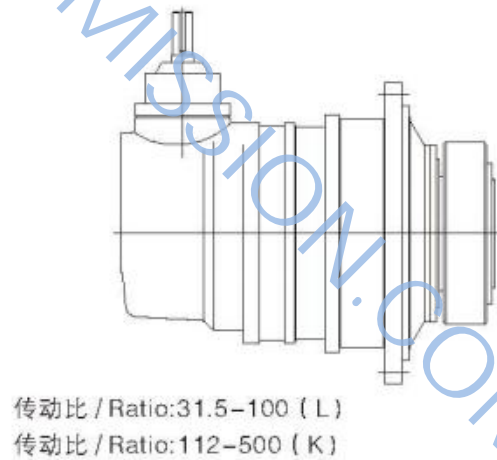
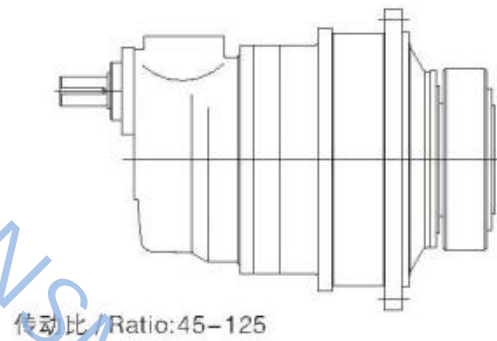
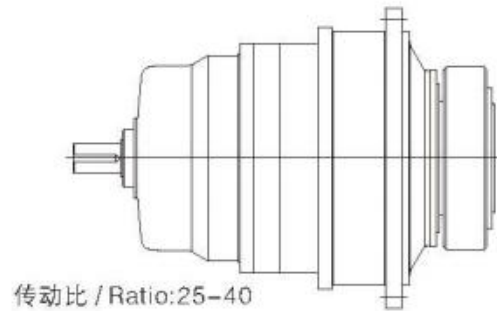
Two Planetary Gear Stages

示例 / Example

RP	2	N	A
----	---	---	---

RP	2	S	A
----	---	---	---

RP	2	L	A
RP	2	K	A



A = 带锁紧盘或渐开线花键的空心轴输出 / Hollow shaft with shrink disk or involute splines  
B = 带平键或渐开线花键的实心轴输出 / Solid shaft with shrink disk or involute splines

N = 标准 (同轴式) / Standard (coaxial)

S = 一级斜齿平行轴 / Helical gear stage

L = 一级伞齿直交轴 / Bevel gear stage

K = 一级伞齿-斜齿直交轴 / Bevel-helical gear stage

2 = 行星齿轮级数 / Number of planetary gear stages

RP

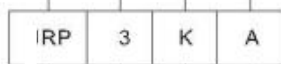
Planetary gear units



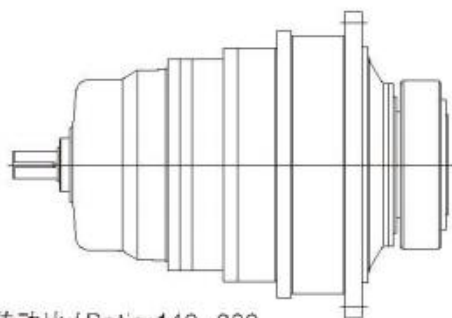


### 三级行星齿轮

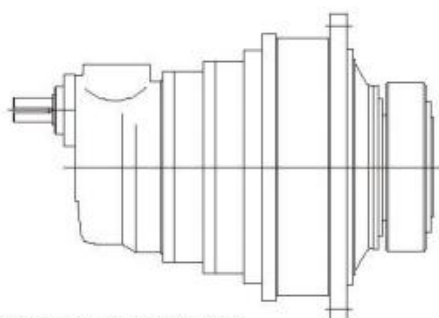
示例 / Example



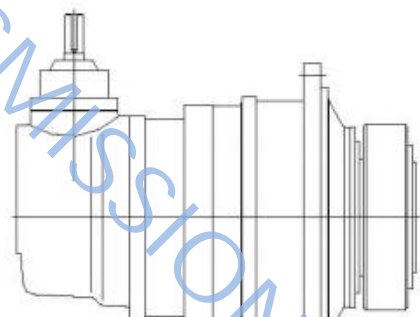
### Three Planetary Gear Stages



传动比 / Ratio: 140-280



传动比 / Ratio: 280-900



传动比 / Ratio: 560-4000

A = 带锁紧盘或渐开线花键的空心轴输出 / Hollow shaft with shrink disk or involute splines  
 B = 带平键或渐开线花键的实心轴输出 / Solid shaft with shrink disk or involute splines

N = 标准 (同轴式) / Standard (coaxial)

S = 一级斜齿平行轴 / Helical gear stage

K = 一级伞齿-斜齿直交轴 / Bevel-helical gear stage

3 = 行星齿轮级数 / Number of planetary gear stages

RP

Planetary gear units



## 2. 型号表示 Model Designation

	<b>RP</b>	<b>3</b>	<b>N</b>	<b>A</b>	<b>12</b>	<b>160</b>	<b>500</b>	<b>00</b>
1	2	3	4	5	6	7	8	9
1	2 产品代码 RP-行星齿轮箱			3 行星齿轮传动级数 2,3				
4 齿轮箱类型 N-标准型(同轴式) S-一级斜齿平行轴 L-一级伞齿直交轴 K-一级伞齿斜齿直交轴			5 输出轴型式 A-带锁紧盘的空心轴输出 B-带平键的实心轴输出 C-带渐开线花键的空心轴输出 D-带渐开线花键的实心轴输出			6 规格 (9...36)		
7 公称传动比 见: P37-39			8 轴的布置型式 见: P60			9 附件 见: P44-50		

	<b>RP</b>	<b>3</b>	<b>N</b>	<b>A</b>	<b>12</b>	<b>160</b>	<b>500</b>	<b>00</b>
1	2	3	4	5	6	7	8	9
1	2 Product Code RP - Planetary Gear Units			3 Numbers of planetary gear stages 2,3				
4 Type of planetary gear N -Standard(coaxial) S-Helical gear stage L-Bevel gear stage K-Bevel-helical gear stage			5 Output shaft design A-Hollow Shaft Output with Locking Plate B-Solid Shaft Output with Flat Key C-Hollow Shaft Output with Involute Spline D-Solid Shaft Output with Involute Spline			6 Size (9...36)		
7 Nominal ratios See page 37-39			8 Identifications of Shaft Arrangements See page 60			9 Add-on Pieces See page 44-50		

示例 RP3NA12-160-500-00

Example JRP3NA12-160-500-00

RP系列产品中同轴式行星齿轮箱, 3级行星齿轮传动, 带锁紧盘的空心轴输出, 12号齿轮箱, 公称传动比为160, 齿轮箱卧式安装, 无附件。

Coaxial planetary gear units, 3-Planetary gear stage, Hollow shaft with shrink involute splines, Size 12, Nominal ratio 160, Horizontal mounting position, Without add-on piece.



### 3. 行星齿轮箱选型

## Planetary Gear Units Type Selection

### 3.1 符号说明

#### Key to Symbols

ED = 每小时工作周期, 以%表示 (例如ED =60%/h)	ED = Operating cycle per hour in%, e.g. ED =60%/h
f1 = 工作机系数 (表1), 见第15页	f1 = Factor for driven machine(table 1),page 15
f2 = 原动机系数 (表2), 见第16页	f2 = Factor for prime mover(table 2),page 16
f3 = 峰值扭矩系数 (表3), 见第16页	f3 = Peak torque factor(table 3),page 16
f4 = 环境温度系数 (表4), 见第16页	f4 = Thermal factor(table 4),page 16
f5 = 载荷利用系数 (表5), 见第16页	f5 = Utilization factor(table 5),page 16
f6 = 海拔高度系数 (表6), 见第16页	f6 = Actitude factor(table 6),page 16
Fr2 = 容许作用在轴D2上的径向力(kN)	FR2 = Permissible radial forces(kN)on shaft D2
i = 实际传动比	i = Actual ratio
iN = 公称传动比	iN = Nominal ratio
iS = 所需传动比	is = Required ratio
n1 = 输入转速(r/min)	n1 = Input speed(r/min)
n2 = 输出转速(r/min)	n2 = Output speed(r/min)
PG = 所需热容量(kW)	PG = Required thermal capacity(kW)
PG1 = 不带辅助冷却装置的齿轮箱热容量(kW)	PG1 = Thermal capacity(kW)for gear units without auxiliary cooling
PN = 齿轮箱额定功率(kW), 见功率表	PN = Nominal power rating of gear unit(kW), See rating tables
Perf = 所需功率(kW)	Perf = Required power rating(kW)
P2 = 工作机功率(kW)	P2 = Power rating of driven machine(kW)
Pst = 起动功率(kW)	Pst = Starting power rating(kW)
t = 环境温度(°C)	t = Ambient temperature(°C)
TA = 输入轴最大扭矩, 例如峰值工作扭矩, 启动扭矩或制动扭矩(Nm)	TA = Max.torque occurring on input shaft,e.g. peak operating,starting-or braking torque(Nm)
T2N = 额定输出扭矩(Nm)	T2N = Nominal output torque(Nm)
T2 = 工作机扭矩(Nm)	T2 = Torque(Nm)of driven machine
P2eq = 当量功率(kW)	P2eq = Equivalent power rating(kW)
PI, PII, Pn = 与载荷谱对应的功率分量(kW)	PI, PII, Pn = Fractions of power rating(kW) obtained from service classification
T2eq = 当量扭矩(Nm)	T2eq = Equivalent torque(Nm)
TI, TII, Tn = 与载荷谱对应的扭矩分量(Nm)	TI, TII, Tn = Fractions of torque(Nm) obtained from Service classification
XI, XII, Xn = 与载荷谱对应的时间分量(%)	XI, XII, Xn = Fractions of time(%) obtained from Service classification



## 3.2 选型指南 Guidelines for the Selection

### 3.2.1 恒定功率 Constant Power Rating

<p>1. 确定齿轮箱类型和规格 Determination of gear unit type and size</p>	<p>1.1 确定传动比 / Find the transmission ratio  <math display="block">i = \frac{n_1}{n_2}</math></p> <p>1.2 确定齿轮箱额定功率 / Determine the nominal power rating of the gear unit  <math display="block">P_N \geq P_{\text{er}} = P_2 \times f_1 \times f_2</math></p> <p>1.3 检验是否满足下列条件 / Check for overdimensioning          如果不满足下列条件请与我们联系 / It is not necessary to consult us, if:  <math display="block">3.33 \times P_2 \geq P_N</math></p> <p>1.4 校核最大扭矩, 例如峰值工作扭矩, 起动扭矩或制动扭矩          Check for maximum torque ,e.g.peak operating-, starting- or braking torque  <math display="block">P_N \geq P_{\text{st}} = \frac{T_A \times n_1}{9550} \times f_3</math>          根据额定功率表中<math>i_N</math>和<math>P_N</math>值确定齿轮箱的规格和传动级数          Gear unit sizes and number of gear stages are given in rating tables depending on <math>i_N</math> and <math>P_N</math></p> <p>1.5 校核实际传动比是否合适, 见第37, 38页和第39页          Check whether the actual ratio <math>i</math> as per tables on pages 37,38 and 39 is acceptable</p>
<p>2. 确定齿轮箱载荷利用率和所需的热容量<math>P_e</math> Determination of gear unit utilization and required thermal capacity <math>P_e</math></p>	<p>2.1 用于热容量计算的齿轮箱载荷利用率          Gear unit utilization for the determination of the thermal capacity          载荷利用率(%) / Utilization in % = <math>P_2 / P_N \times 100</math>           根据载荷利用率由第16页表5中查得系数<math>f_3</math>          The <math>f_3</math> factor can be calculated from table 5, page 16, as a function of the Percentage utilization</p> <p>2.2 齿轮箱不带辅助冷却装置可以满足要求, 如果:          Adequate for gear units without auxiliary cooling, if:  <math display="block">P_2 \leq P_G = P_{G1} \times f_4 \times f_5 \times f_6</math></p> <p>2.3 为了达到较高的热容量, 需要通过气-油冷却器或水-油冷却器进行冷却, 敬请垂询          For higher thermal capacities, cooling by external air cooler or water cooler on request</p>



### 3.2.2 可变功率 Variable Power Rating

对于以恒定转速和可变功率运行的工作机，其齿轮箱是根据当量功率确定的。在一个工作周期中，其不同阶段 I、II...n 所需要的功率分别为  $P_I, P_{II}, \dots, P_n$ ，所对应的时间分量分别为  $X_I, X_{II}, \dots, X_n$ ，当量功率即可根据这些参数按以下公式计算。

For driven machines with constant speeds and variable power ratings, the gear unit can be designed according to the equivalent power rating. For this, a working cycle where phases I、II...n require power  $P_I, P_{II}, \dots, P_n$  and the respective power ratings operate for time fractions  $X_I, X_{II}, \dots, X_n$  is taken as a basis. The equivalent power rating can be calculated from these specifications with the following formula.

$$P_{2eq} = \sqrt[6.6]{P_I^{6.6} \times \frac{X_I}{100} + P_{II}^{6.6} \times \frac{X_{II}}{100} + \dots + P_n^{6.6} \times \frac{X_n}{100}}$$

然后按照第 1.1...1.5 项和第 2.1...2.3 项确定齿轮箱规格，需满足：

The size of the gear unit can then be determined analogously to points 1.1...1.5 and 2.1...2.3, as follows:

$$P_N \geq P_{err} = P_{2eq} \times f_1 \times f_2$$

然后，在  $P_N$  确定后，按照以下条件检验各个时间分量及其相对应的功率分量：

Then, when  $P_N$  has been determined, the power and time fractions must be checked by applying the following requirements:

- 1) 各个功率分量  $P_I, P_{II}, \dots, P_n$  应大于  $0.4 \times P_N$
- 2) 各个功率分量  $P_I, P_{II}, \dots, P_n$  不能超过  $1.4 \times P_N$
- 3) 功率分量  $P_I, P_{II}, \dots, P_n$ ，中大于  $P_N$  的分量所对应的时间分量  $X_I, X_{II}, \dots, X_n$  总和，不超过 10%。

- 1) The individual power fractions  $P_I, P_{II}, \dots, P_n$  must be greater than  $0.4 \times P_N$ .
- 2) The individual power fractions  $P_I, P_{II}, \dots, P_n$  must not exceed  $1.4 \times P_N$ .
- 3) If power fractions  $P_I, P_{II}, \dots, P_n$  are greater than  $P_N$ , the sum of time fractions  $X_I, X_{II}, \dots, X_n$ , must not exceed 10%.

如果以上三个条件中的任何一项不满足，则必须重新计算  $P_{2eq}$  和  $P_{err}$ 。

If any one of the three requirements is not met,  $P_{2eq}$  and  $P_{err}$  must be recalculated.

特别应加以注意的是在计算  $P_{2eq}$  时没有计入的短时峰值功率不能大于  $P_{max} = 2 \times P_N$ 。

It must be borne in mind that a brief peak power rating not included in the calculation of  $P_{2eq}$  must not be greater than  $P_{max} = 2 \times P_N$ .

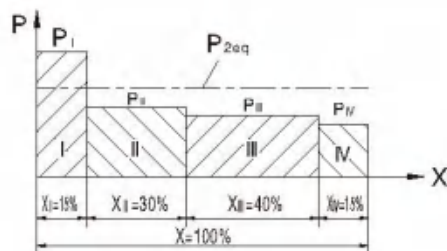
在可变扭矩和恒定转速的应用情况下，齿轮箱按所谓的当量扭矩计算。

In applications where the torque is variable but the speed constant the gear unit can be designed on the basis of the so-called equivalent torque.

对某些特定的应用，按有限抗疲劳寿命设计的齿轮箱就足以满足应用了，如偶尔动作（闸门锁定机构）或慢速输出（ $n_2 < 4 \text{ r/min}$ ）等。

A gear unit design which is finite-life-fatigue-resistant can be sufficient for certain applications, for example, sporadic operation (lock-gate drives) or slow output speeds ( $n_2 < 4 \text{ r/min}$ ).

示例 / Example:  
载荷谱 / Service classification







### 3.3 服务系数 Service Factors

表1 Table 1		工作机系数 Factor for driven machine					$f_1$																										
工作机 Driven machines		日带载运行时间(小时) Effective daily operating period under load in hours			工作机 Driven machines		日带载运行时间(小时) Effective daily operating period under load in hours																										
										0.5	>0.5-10	>10	0.5	>0.5-10	>10																		
<b>污水处理</b> 浓缩器(中心传动) 压滤器 絮凝器 曝气机 捞渣设备 纵向、回转组 合式捞渣装置 浓缩器 螺杆泵 水轮机 泵 离心泵 容积式泵 1个活塞 >1个活塞	<b>Waste water treatment</b> Thickeners(central drive) Filter presses Flocculation apparatus Aerators Raking equipment Combined longitudinal and rotary rakes Rin. thickeners Screw pumps Water turbines Pumps Centrifugal pumps Positive-displacement pumps 1 piston >1 piston	-	-	1.2	<b>输送机械</b> 斗式输送机 绞车 卷扬机 皮带输送机 ≤150kW 皮带输送机 >150kW 客用电梯* 刮板式输送机 自动扶梯 轨道行走机构	<b>Conveyors</b> Bucket conveyors Hauling winches Hoists Belt conveyors 150kW Belt conveyors 150kW Goods lifts Passenger lifts Apron conveyors Escalators Rail traveling gears	-	1.5	1.8	-	1.4	1.6	1.8	-	1.5	1.8	1.5	1.6	1.6	-	1.2	1.5	1.8										
<b>挖泥机</b> 斗式输送机 履带式行走机构 斗轮式挖掘机 用于捡拾 用于粗料 切碎机 采掘臂回转*	<b>Dredgers</b> Bucket conveyors Caterpillar travelling gears Bucket wheel excavators as pick-up for primitive material Cutter heads Slewing gears*	-	1.6	1.8	<b>变频装置</b> 往复式压缩机	Frequency converters Reciprocating compressors	-	1.8	2.0	-	1.8	1.9	<b>起重机械**</b> 回转机构* 俯仰机构 行走机构 提升机构 转臂式起重机	<b>Cranes</b> Slewing gears Luffing gears Travelling gears Hoisting gears Derricking jib cranes	1.0	1.4	1.8	1.0	1.1	1.4	1.1	1.6	2.0	1.0	1.2	1.5	1.0	1.2	1.6				
<b>弯板机*</b>	Plate bending machines*	-	1.0	1.0	<b>冷却塔</b> 冷却塔风扇 风机(轴流和离心式)	Cooling tower fans Blowers(axial and radial)	-	-	2.0	-	-	1.4	1.6	<b>食品工业</b> 蔗糖生产 甘蔗切碎机* 甘蔗碾磨机 甜菜糖生产 甜菜破碎机 榨取机、机械致 冷机、蒸发器 甜菜清洗机 甜菜切碎机	<b>Food industry</b> Cane sugar production Cane knives Cane mills Beet sugar production Beet cossettes macerators, Extraction plants,Mechanical refrigerators,Juice boilers, Sugar beet washing machines, Sugar beet cutters	-	-	2.0	-	-	1.7	-	-	1.7	-	-	1.2	-	-	1.4	-	-	1.5
<b>化学工业</b> 挤压机 调浆机 橡胶研光机 冷却圆筒 混料机, 用于 均匀介质 非均匀介质 搅拌机, 用于 密度均匀介质 不均匀介质 不均匀气体吸收 烘炉 离心机	<b>Chemical industry</b> Extruders Dough mills Rubber calenders Cooling drums Mixers for uniform media non-uniform media Agitators for media with uniform density non-uniform density non-uniform gas absorption Toasters Centrifuges	-	-	1.6	<b>造纸机械</b> 各种类型*** 碎浆机驱动装置	Paper machines of all kind Pulper drives	-	1.8	2.0	-	1.8	2.0	<b>离心式压缩机</b> 索道缆车 运货索道 往返系统空中索道 T型杆升降机 连续索道	<b>Centrifugal compressors</b> Cableways Material ropeways To-and fro system aerial ropeways T-bar lifts Continuous ropeways	-	1.4	1.5	1.3	1.4	1.6	1.8	-	1.3	1.4	-	1.4	1.6	-	1.5	1.5	1.4	2.0	2.0
<b>金属加工设备</b> 翻板机 推钢机 绕线机 冷床横移架 辊式矫直机 辊道 连续式 间歇式 可逆式轧管机 剪切机 连续式* 曲柄式* 连续铸造装置 轧机 可逆式开坯机 可逆式板坯轧机 可逆式线材轧机 可逆式薄板轧机 可逆式中厚板轧机 辊缝调节驱动装置	<b>Metal working mills</b> Plate tilters Ingot pushers Winding machines Cooling bed transfer frames Roller straighteners Roller tables continuous intermittent Reversing tube mills Shears continuous crank type Continuous casting drivers Rolls Reversing blooming mills Reversing slabbing mills Reversing wire mills Reversing sheet mills Reversing plate mills Roll adjustment drives	1.0	1.0	1.2	<b>水泥工业</b> 混凝土搅拌机 破碎机* 回转窑 管式磨机 选粉机 辊压机	<b>Cement industry</b> Concrete mixers Breakers Rotary kilns Tube mills Separators Roll crushers	-	1.5	1.5	-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			

1.工作机额定功率 $P_2$ 的确定:

\* ) 按最大的扭矩确定额定功率。

\*\* ) 可将载荷准确地分类

\*\*\* ) 检验热容量是绝对必要的。

2.所列各项系数均为经验值。使用这些系数的前提条件是,所述机械设备应符合通常的设计规范和载荷条件。如遇特殊情况,请及时与我们联系。

3.对于那些未列入此表的工作机械,请与我们联系。

1.Design for power rating of driven machine  $P_2$

\* )Designed power corresponding to max.torque

\*\* )Load can be exactly classified.

\*\*\* )A check for thermal capacity is absolutely essential

2.The listed factors are empirical values.Prerequisite for their application is that the machinery and equipment mentioned correspond to generally accepted design and load specifications.In case of deviations from standard conditions,please refer to us.

3.For driven machines which are not listed in this table,please refer to us.



表 2 原动机系数 $f_2$	
电机, 液压马达, 汽轮机	1.0
4-6缸活塞发动机周期变化1:100至1:200	1.25
1-3缸活塞发动机周期变化最高达1:100	1.5

Table 2 Factor for prime mover $f_2$	
Electric motors, hydraulic motors, turbines	1.0
Piston engines 4-6 cylinders cyclic variation 1:100 to 1:200	1.25
Piston engines 1-3 cylinders cyclic variation up to 1:100	1.5

表 3 峰值扭矩系数 $f_3$				
	每小时峰值载荷次数			
	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

Table 3 Peak torque factor $f_3$				
	Load peaks 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 4 环境温度系数 $f_4$					
不带辅助冷却装置					
环境温度	每小时工作周期 (ED), 以%表示				
	100	80	60	40	20
10°C	1.14	1.20	1.32	1.54	2.04
20°C	1.00	1.06	1.16	1.35	1.79
30°C	0.87	0.93	1.00	1.18	1.56
40°C	0.71	0.75	0.82	0.96	1.27
50°C	0.55	0.58	0.64	0.74	0.98

Table 4 Thermal factor $f_4$					
Without auxiliary cooling					
Ambient temperature	Operating cycle per hour(ED) in %				
	100	80	60	40	20
10°C	1.14	1.20	1.32	1.54	2.04
20°C	1.00	1.06	1.16	1.35	1.79
30°C	0.87	0.93	1.00	1.18	1.56
40°C	0.71	0.75	0.82	0.96	1.27
50°C	0.55	0.58	0.64	0.74	0.98

表 5 载荷利用率系数 $f_5$							
30%	40%	50%	60%	70%	80%	90%	100%
0.66	0.77	0.83	0.90	0.90	0.95	1.0	1.0

Table 5 Utilization factor $f_5$							
30%	40%	50%	60%	70%	80%	90%	100%
0.66	0.77	0.83	0.90	0.90	0.95	1.0	1.0

表 6 环境温度系数 $f_6$					
不带辅助冷却装置					
系数	海拔高度 (m, 高于海平面)				
	高达 1000	高达 2000	高达 3000	高达 4000	高达 5000
$f_6$	1.0	0.95	0.90	0.85	0.80

Table 6 Factor for altitude $f_6$					
Without auxiliary cooling					
Factor	Altitude (metres above MSL)				
	up to 1000	up to 2000	up to 3000	up to 4000	up to 5000
$f_6$	1.0	0.95	0.90	0.85	0.80



### 3.4 选型举例1

#### Selection Example 1

已知条件:	Known criteria	
原动机	Prime mover	
电机功率: P1 = 55kW	Electric motor:	P1 = 55kW
电机转速: n1 = 1500 r/min	Motor speed:	n1 = 1500 r/min
最大起动扭矩: TA = 660 Nm	Max.starting torque:	TA = 660 Nm
工作机	Driven machine	
刮板式输送机扭矩: T2 = 300 000 Nm	Apron conveyor :	T2 = 300 000 Nm
转速: n2 = 1.65 r/min	Speed:	n2 = 1.65 r/min
每天运行时间: 24小时 / 天	Duty:	24h / day
每小时起动次数: 7	Starts per hour:	7
每小时工作周期: ED = 100%	Operating cycle per hour:	ED = 100%
环境温度: 30°C	Ambient temperature:	30°C
室外安装	Installation in the open	
海拔高度: 800m	Altitude: 800m	
1. 确定齿轮箱类型	1. Selection of gear unit type	
1.1 确定传动比	1.1 Calculation of transmission ratio	
	$i_S = n_1/n_2 = 1500/1.65 = 909.09$	$i_N = 900$
1.2 确定齿轮箱类型	1.2 Determination of gear unit type	
选择类型 JRP3K.. (实际传动比以见第37页)	Type JRP3K.. selected (for actual ratio, see page 37)	
2. 确定齿轮箱规格	2. Determination of gear unit size	
2.1 确定工作机额定功率	2.1 Determination of power rating of driven machine	
	$P_2 = T_2 \times n_2 / 9550 = 300\,000 \times 1.65 / 9550 = 51.83 \text{ kW}$	
2.2 确定齿轮箱额定功率	2.2 Determination of nominal power rating of gear unit	
	$P_N \geq P_{\text{Perf}} = P_2 \times f_1 \times f_2 = 51.83 \times 1.5 \times 1 = 77.75 \text{ kW}$	$P_N = 80 \text{ kW} > P_{\text{Perf}} = 77.75 \text{ kW}$
从功率表中选择类型 JRP3K.., 齿轮箱规格 22, 额定功率 $P_N = 80 \text{ kW}$ 。(见第 34 页)	Selected from power rating table: type JRP3K.., gear unit size 22, with $P_N = 80 \text{ kW}$ . (See Page 34)	
	$3.33 \times P_2 = 3.33 \times 51.83 = 172.59 \text{ kW} > P_N = 80 \text{ kW}$	
满足要求!	It is not necessary to consult us.	
2.3 校核起动功率	2.3 Checking the starting power rating	
	$P_N \geq P_{\text{st}} = T_A \times n_1 \times f_3 / 9550 = 660 \times 1500 \times 0.65 / 9550 = 67.38 \text{ kW}$	$P_N = 80 \text{ kW} > P_{\text{st}} = 67.38 \text{ kW}$
3. 确定热容量	3. Determination of thermal capacity	
3.1 齿轮箱载荷利用率	3.1 Gear unit utilization	
	载荷利用率(%) / Utilization in % = $P_2 / P_N \times 100 = 51.83 / 80 \times 100 = 65\%$	
3.2 从类型 JRP3K.. 参数表中得到热容量 (见第 34 页)	3.2 Thermal capacity acc. To table for type JRP3K.. (See Page 34)	
	$P_G = P_{G1} \times f_4 \times f_5 \times f_6 = 128 \times 0.87 \times 0.9 \times 1 = 100.22 \text{ kW}$	$P_2 = 51.83 \text{ kW} < P_G = 100.22 \text{ kW}$
所以齿轮箱不需要辅助冷却装置。	So auxiliary cooling device is unnecessary.	
4. 确定齿轮箱布置型式	4. Determination of the design	
直交轴行星齿轮箱: JRP3KA	Bevel-helical planetary gear unit: JRP3KA	
型式: "00"	Variant: "00"	
安装方式: 卧式安装	Mounting position: horizontal	
输入轴 d1 布置型式: "522" (见第 60 页)	Pos. of the input shaft d1: e.g. "522" (See Page 60)	
输出轴 d2 旋转方向: 逆时针, 从轴端面观察	Direct. of rotation of output shaft d2: ccw, viewing on shaft end face	
输出轴 d2 形式: 带锁紧盘的空心轴输出	Design d2: hollow shaft with shrink disk	
型号表示为: RP3KA22-900-522-00	Model: RP3KA22-900-522-00	



## 选型举例 2 Selection Example 2

已知条件:

原动机  
电机功率:  $P_1=130\text{kW}$   
电机转速:  $n_1=1000\text{ r/min}$   
最大起动扭矩:  $T_A=2000\text{ Nm}$   
工作机  
搅拌机, 均匀介质  
转速:  $n_2=12.5\text{ r/min}$   
每天运行时间: 12小时/天  
每小时工作周期:  $ED=60\%$   
环境温度:  $20^\circ\text{C}$   
室外安装  
海拔高度: 600m  
载荷谱

T I 在20%的时间分量中为47 000 Nm  
T II 在40%的时间分量中为50 000 Nm  
T III 在30%的时间分量中为53 000 Nm  
T IV 在10%的时间分量中为100 000 Nm

1. 确定齿轮箱类型

1.1 确定传动比

Known criteria

Prime mover  
Electric motor:  $P_1=130\text{kW}$   
Motor speed:  $n_1=1000\text{ r/min}$   
Max.starting torque:  $T_A=2000\text{ Nm}$   
Driven machine  
Mixer, uniform media  
Speed:  $n_2=12.5\text{ r/min}$   
Duty: 12h / day  
Operating cycle per hour:  $ED=60\%$   
Ambient temperature:  $20^\circ\text{C}$   
Installation in the open  
Altitude: 600m  
Service classification

T I 47 000 Nm at 20% of time  
T II 50 000 Nm at 40% of time  
T III 53 000 Nm at 30% of time  
T IV 100 000 Nm at 10% of time

1. Selection of gear unit type

1.1 Calculation of transmission ratio

$$iS = n_1/n_2 = 1000/12.5 = 80 \quad iN = 80$$

1.2 确定齿轮箱类型

选择类型 JRP2S.. (实际传动比见第37页)

1.2 Determination of gear unit type

Type JRP2S.. selected (for actual ratio See Page37)

2. 确定齿轮箱规格

2. Determination of gear unit size

2.1 从给出的载荷谱中确定当量扭矩

2.1 Determination of equivalent torque from the given service classification

$$T_{2eq} = \sqrt[6.6]{T_I^{6.6} \times \frac{X_I}{100} + T_{II}^{6.6} \times \frac{X_{II}}{100} + \dots + T_n^{6.6} \times \frac{X_n}{100}}$$

$$T_{2eq} = \sqrt[6.6]{47000^{6.6} \times \frac{20}{100} + 50000^{6.6} \times \frac{40}{100} + 53000^{6.6} \times \frac{30}{100} + 100000^{6.6} \times \frac{10}{100}} = 71577.84\text{ Nm}$$

请注意第13页选型指南的条件1),2),3)

Observe conditions 1),2),3), of the guidelines for The selection ,page 13

2.2 确定工作机额定功率

2.2 Determination of power rating of driven machine

$$P_{2eq} = T_{2eq} \times n_2/9550 = 71577.84 \times 12.5/9550 = 93.69\text{ kW}$$

2.3 确定齿轮箱额定功率

2.3 Determination of nominal power rating of gear unit

$$P_{ef} = P_{2eq} \times f_1 \times f_2 = 93.69 \times 1.4 \times 1.0 = 131.17\text{ kW} \quad P_N = 153\text{ kW} > P_{ef} = 131.17\text{ kW}$$

从功率表中选择JRP2S.., 齿轮箱规格14, 额定功率 $P_N=153\text{kW}$ , (见第26页)

Selected from power rating table: type JRP2S..., gear unit size 14, with  $P_N = 153\text{kW}$ , (See Page 26)

$$3.33 \times P_{2eq} = 3.33 \times 93.69 = 311.99\text{ kW} > P_N = 153\text{ kW}$$

满足要求!

It is not necessary to consult us.

2.4 校核起动扭矩

2.4 Checking the starting torque

$$P_N \geq P_{st} = T_A \times n_1 \times f_3/9550 = 2000 \times 1000 \times 0.5/9550 = 104.71\text{ kW} \quad P_N = 153\text{ kW} > P_{st} = 104.71\text{ kW}$$

3. 确定热容量

3. Determination of thermal capacity

## 3.1 齿轮箱载荷利用率

载荷利用率(%) / Utilization in % =  $P_{2eq} / P_N \times 100 = 93.69 / 153 \times 100 = 61\%$

## 3.2 从类型 JRP2S..参照表中得到热容量

(见第26页)

$PG = PG_1 \times f_4 \times f_5 \times f_6 = 94 \times 1.16 \times 0.9 \times 1 = 98.13 \text{ kW}$   $P_{2eq} = 93.69 \text{ kW} < PG = 98.13 \text{ kW}$

不需要辅助冷却装置!

## 4. 确定齿轮箱布置型式

平行轴行星齿轮箱: JRP2SA

型式: "00"

安装方式: 卧式安装

输入轴d1布置型式: "512"

(见第60页)

输出轴d2旋转方向: 双向

输出轴d2形式: 带锁紧盘的空心轴输出

型号表示为: IRP2SA14-80-512-00

## 3.1 Gear unit utilization

载荷利用率(%) / Utilization in % =  $P_{2eq} / P_N \times 100 = 93.69 / 153 \times 100 = 61\%$

## 3.2 Thermal capacity acc. To table for type JRP2S..

(See Page 26)

$PG = PG_1 \times f_4 \times f_5 \times f_6 = 94 \times 1.16 \times 0.9 \times 1 = 98.13 \text{ kW}$   $P_{2eq} = 93.69 \text{ kW} < PG = 98.13 \text{ kW}$

No auxiliary cooling required!

## 4. Determination of the design

Helical planetary gear unit: JRP2SA

Variant: "00"

Mounting position:

horizontal

Pos. of the input shaft d1:

e.g. "512"

(See Page 60)

Direct. of rotation of output shaft d2: in both directions

Design d2:

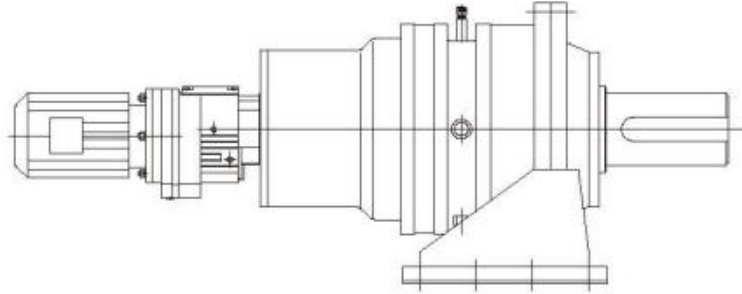
hollow shaft with

shrink disk

Model: RP2SA14-80-512-00

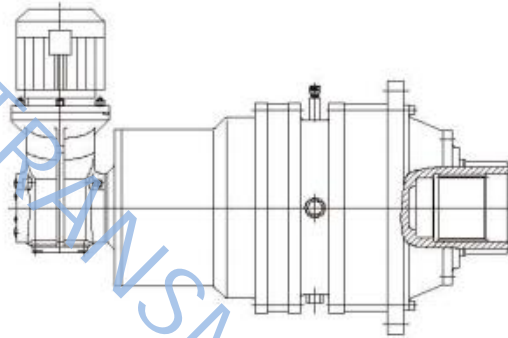


## 4. 组合型式 Combinations



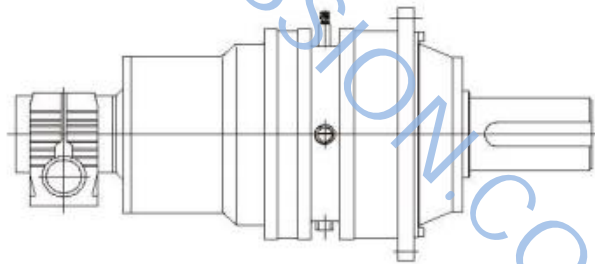
IRP.../R组合, 详情来电咨询。

RP.../R combination upon request



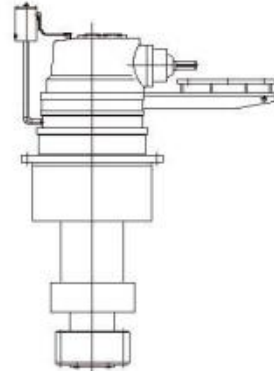
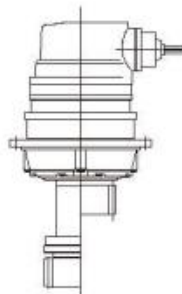
RP.../K组合, 详情来电咨询。

RP.../K combination upon request



RP.../S组合, 详情来电咨询。

RP.../S combination upon request



IRP.../H回转机构, 详情来电咨询。

RP.../H combination (Slewing Gears) upon request

## 5. 技术数据

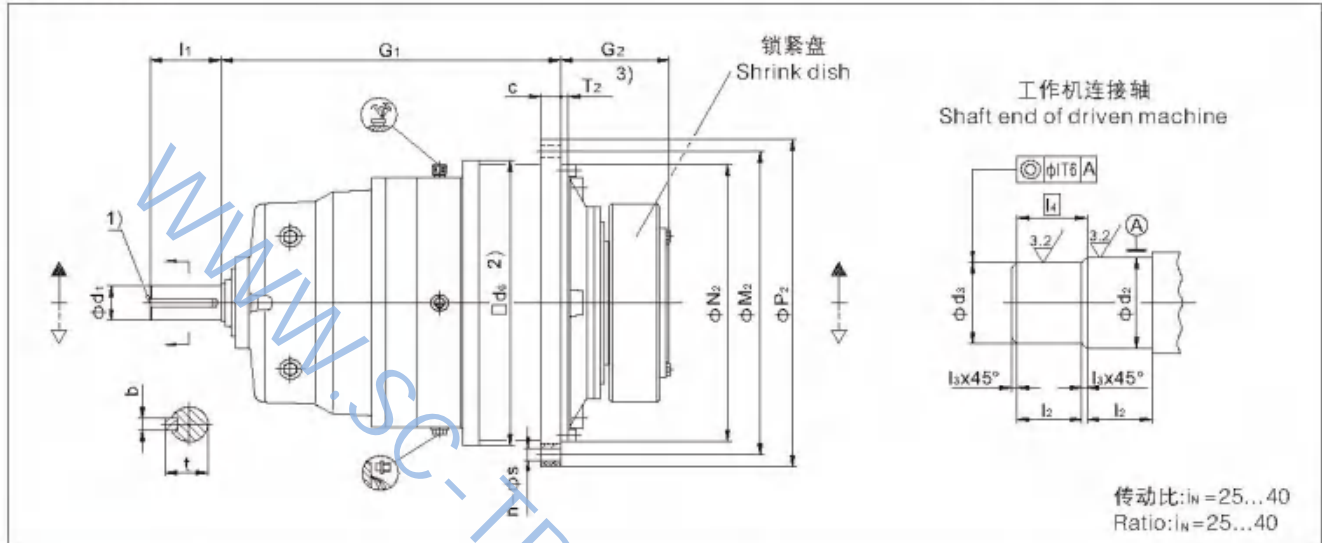
### Technical Data

外形尺寸和重量

类型 RP2NA..

Dimension and Weight

Type RP2NA..



RP2NA. 规格 Size	额定输出扭矩 Nominal Output Torques $T_{2N}$ Nm	输入轴尺寸(mm) Input shaft Dimension (mm)					$d_2$	$d_1$	$z$	$b$	$l_4$	$P_2$	$C$	$M_2$	$N_2$	$T_2$	$Q_2$	法兰孔尺寸 Flange bolts		重量 Weight (kg) 4)	
		$d_1$	$l_1$	$G_1$	$b$	$t$												$n$	$s$		
9	22000	55m6	90	469	16	59	120h6	115h6	65	2.5	57.5	428	24	388	350h7	$6 \pm 1.5$	165	356	24	18	240
10	31000	55m6	90	489	16	59	130h6	125h6	70	2.5	72.5	472	28	436	394h7	$8 \pm 1.5$	174	400	28	18	290
11	42000	70m6	120	579	20	74.5	140h6	135h6	82.5	2.5	85	525	32	485	425h7	$8 \pm 1.5$	204	436	20	22	350
12	60000	70m6	120	593	20	74.5	160h6	155h6	90	2.5	92.5	605	34	555	495h7	$9 \pm 1.5$	224	510	20	26	490
13	83000	80m6	140	714	22	85	180g6	175g6	95	2.5	97.5	645	39	595	535h7	$11 \pm 1.5$	241	554	24	26	590
14	117000	80m6	140	737	22	85	210g6	205g6	105	2.5	107.5	720	42	665	610h7	9	278	629	32	26	820
16	160000	95m6	160	851	25	100	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1030
17	202000	95m6	160	877	25	100	250g6	245g6	120	2.5	122.5	895	50	830	750h7	10	294	775	24	33	1500
18	244000	110n6	180	1006	28	116	260g6	255g6	120	2.5	122.5	930	50	865	755h7	10	303	815	32	33	1900
19	295000	110n6	180	1029.5	28	116	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2000
20	354000	110n6	180	1029.5	28	116	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2100
21	392000	120n6	210	1046	32	127	310g6	305g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2650
22	450000	120n6	210	1046	32	127	330g6	325g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2800
23	513000	130n6	210	1150	32	137	350g6	345g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3450
24	592000	130n6	210	1150	32	137	360g6	355g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3900
25	684000	140n6	240	1241	36	148	380g6	375g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	4750
26	763000	140n6	240	1241	36	148	400g6	395g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5150
27	852000	150n6	240	1379	36	158	430g6	425g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6100
28	950000	150n6	240	1379	36	158	450g6	445g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6550
29	1060000	160n6	270	1457	40	169	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	7800
30	1200000	160n6	270	1457	40	169	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8300
31	1330000	170n6	270	1607	40	179	480g6	470g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	10200
32	1500000	170n6	270	1607	40	179	510g6	500g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	10700
33	1680000	180n6	310	1683	45	190	530g6	520g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	12350
34	1920000	180n6	310	1683	45	190	570g6	560g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	13150
35	2240000	190n6	310	1899	45	200	600g6	590g6	272	5	277	1945	112	1825	1685h7	40	656	1720	40	62	17300
36	2600000	190n6	310	1899	45	200	640g6	630g6	272	5	277	1945	112	1825	1685h7	40	656	1720	40	62	18400

1) 轴伸d1中心孔, 见第36页。

2) 所需安装空间。

3) 请注意联接螺栓和凸缘。

4) 不包括锁紧盘和润滑油的重量。

1) For shaft end d1 with centre hole, see page 36

2) Space required.

3) Observe bolted connection and boss.

4) Weight without shrink disk and oil.



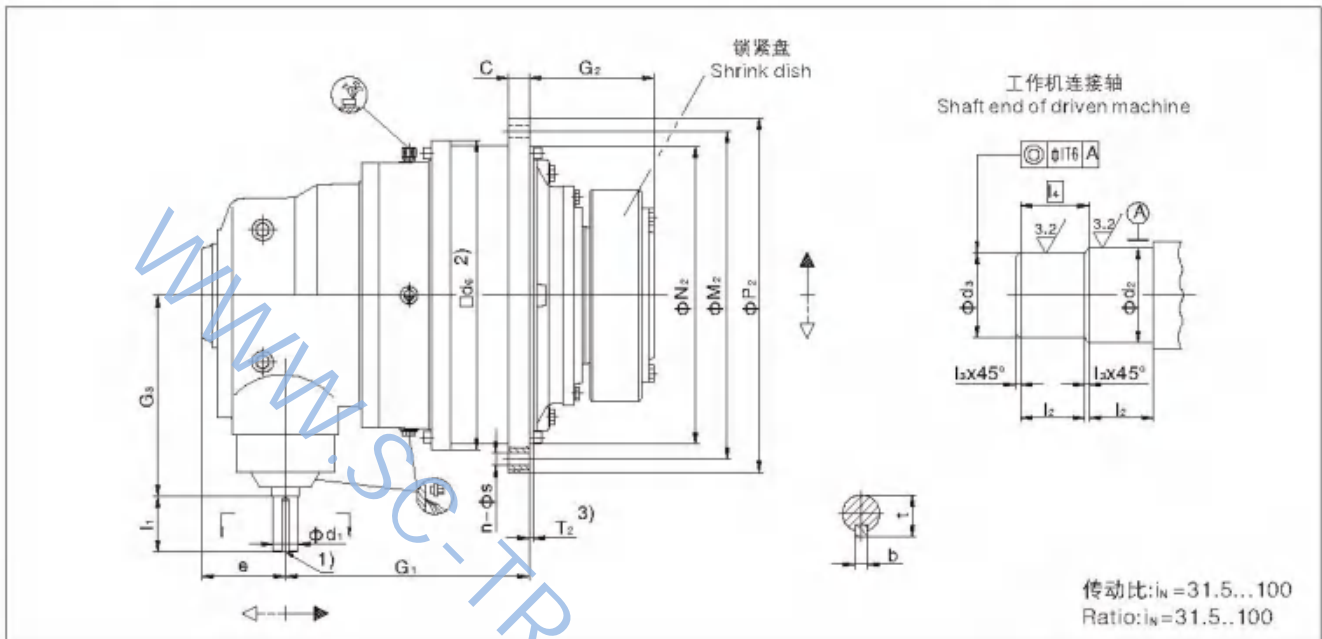


外形尺寸和重量

类型 IRP2LA..

Dimension and Weight

Type RP2LA..



传动比:  $i_N = 31.5 \dots 100$   
Ratio:  $i_N = 31.5 \dots 100$

规格 Size	额定输出扭矩 Nominal Output Torques $T_{2N}$ Nm	输入轴尺寸(mm) Input shaft Dimension (mm)											$d_2$	$d_1$	b	$l_3$	$l_4$	$P_2$	C	$M_2$	$N_2$	$T_2$	$G_2$	$d_5$	法兰孔尺寸 Flange bolts		重量 Weight (kg) 4)
		$i_N \leq 90$				$i_N \geq 100$				$G_1$	$G_a$	e													n	S	
		$d_1$	$l_1$	b	t	$d_1$	$l_1$	b	t																		
9	22000	45m6	100	14	48.5	35m6	80	10	38	425	305	185	120h6	115h6	65	25	67.5	428	24	388	350h7	6±1.5	165	356	24	18	260
10	31000	45m6	100	14	48.5	35m6	80	10	38	446	305	185	130h6	125h6	70	25	72.5	472	28	436	394h7	8±1.5	174	400	28	18	310
11	42000	55m6	110	16	59	40m6	100	12	43	501	350	210	140h6	135h6	82.5	25	80	525	32	485	425h7	8±1.5	204	436	20	22	390
12	60000	55m6	110	16	59	40m6	100	12	43	485	350	210	160h6	155h6	90	25	92.5	505	34	555	495h7	9±1.5	224	510	20	26	520
13	83000	70m6	135	20	74.5	50m6	110	14	53.5	619	415	250	180g6	175g6	95	25	97.5	645	38	595	535h7	11±1.5	241	554	24	26	650
14	117000	70m6	135	20	74.5	50m6	110	14	53.5	630	415	250	210g6	205g6	105	25	107.5	720	42	665	610h7	9	278	629	32	26	910
16	160000	80m6	165	22	85	60m6	140	18	64	705	490	295	230g6	225g6	110	25	112.5	770	44	715	660h7	10	285	680	36	26	1140
17	202000	80m6	165	22	85	60m6	140	18	64	731	490	295	250g6	245g6	120	25	122.5	895	50	830	750h7	10	294	775	24	33	1660
18	244000	90m6	165	25	95	70m6	140	20	74.5	882	605	350	260g6	255g6	120	25	122.5	930	50	865	785h7	10	303	815	32	33	2100
19	295000	90m6	165	25	95	70m6	140	20	74.5	905.5	605	350	280g6	275g6	135	25	137.5	980	56	915	840h7	12	327.5	870	36	33	2200
20	354000	90m6	165	25	95	70m6	140	20	85	905.5	700	350	300g6	295g6	135	25	137.5	980	56	915	840h7	12	327.5	870	36	33	2300
21	392000	110n6	205	28	116	80m6	170	22	85	996	700	400	310g6	305g6	152	25	154.5	1115	62	1025	935h7	24	354	960	32	39	2930
22	450000	110n6	205	28	116	80m6	170	22	85	996	700	400	330g6	325g6	152	25	154.5	1115	62	1120	935h7	24	354	960	32	39	3100
23	513000	110n6	205	28	116	80m6	170	22	85	1055	700	400	350g6	345g6	164	25	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3800
24	592000	110n6	205	28	116	80m6	170	22	106	1055	700	400	360g6	355g6	164	25	166.5	1210	68	1220	1025h7	28	380	1056	36	39	4300
25	684000	130n6	245	32	137	100m6	210	28	106	1138	835	475	380g6	375g6	180	25	182.5	1320	74	1220	1115h7	29	407	1056	36	45	5250
26	763000	130n6	245	32	137	100m6	210	28	106	1138	835	475	400g6	395g6	180	25	182.5	1320	74	1345	1115h7	29	407	1150	36	45	5660
27	852000	130n6	245	32	137	100m6	210	28	106	1272	835	475	430g6	425g6	191	25	193.5	1460	81	1345	1215h7	31	453	1150	32	52	6680
28	950000	130n6	245	32	137	100m6	210	28	106	1272	835	475	450g6	445g6	191	25	193.5	1460	81	1345	1215h7	31	453	1248	32	52	7180
29	1060000	150n6	245	36	158	110n6	210	28	116	1367	945	530	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8500
30	1200000	150n6	245	36	158	110n6	210	28	116	1367	945	530	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	9070
31~36		敬请垂询 / On request																									

- 1) 轴伸d1中心孔, 见第36页。
- 2) 所需安装空间。
- 3) 请注意联接螺栓和凸缘。
- 4) 不包括锁紧盘和润滑油的重量。

- 1) For shaft end  $d_1$  with centre hole, see page 36
- 2) Space required.
- 3) Observe bolted connection and boss.
- 4) Weight without shrink disk and oil.

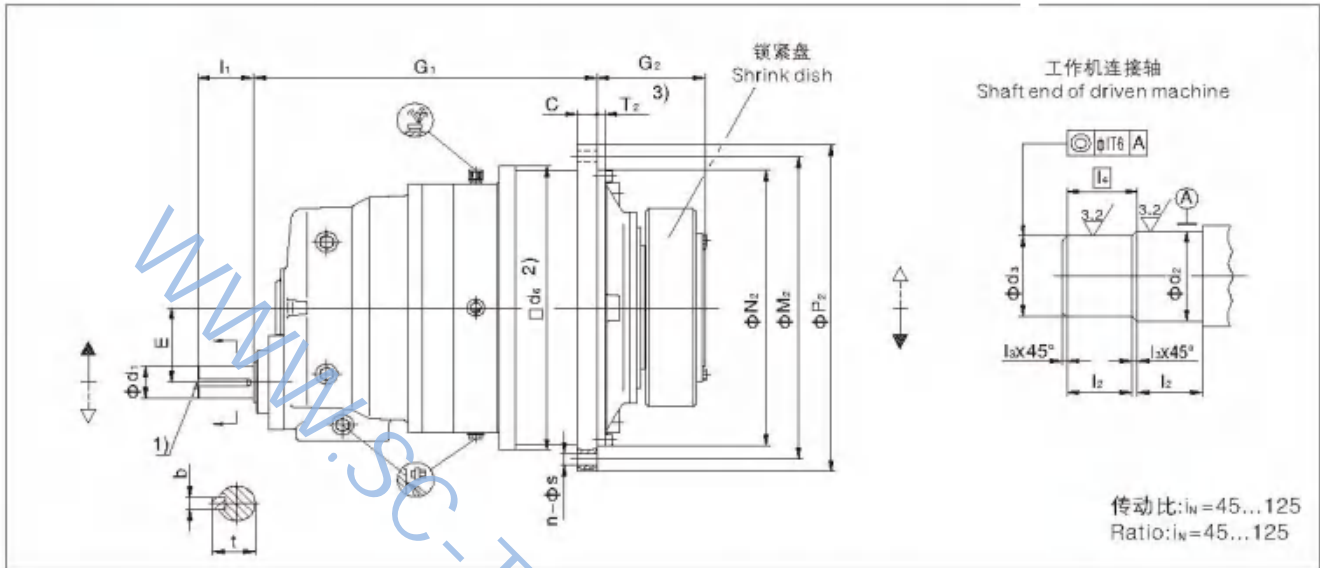


外形尺寸和重量

类型 IRP2SA..

Dimension and Weight

Type IRP2SA..



RP2SA.. 规格 Size	额定输出扭矩 Nominal Output Torques $T_{SH}$ Nm	输入轴尺寸(mm) Input shaft Dimension (mm)						$d_2$	$d_3$	$l_2$	$l_3$	$l_4$	$P_2$	C	$M_2$	$N_2$	$T_2$	$G_2$	$d_e$	法兰孔尺寸 Flange bolts		重量 Weight (kg) 4)
		$d_1$	$l_1$	$G_1$	b	t	E													n	s	
9	22000	38m6	60	469	10	41	90	120h6	115h6	65	2.5	67.5	428	24	388	350h7	6±1.5	165	356	24	18	260
10	31000	38m6	60	489	10	41	90	130h6	125h6	70	2.5	72.5	472	28	436	394h7	8±1.5	174	400	28	18	310
11	42000	55m6	90	579	16	59	115	140h6	135h6	82.5	2.5	85	525	32	485	425h7	8±1.5	204	436	20	22	380
12	60000	55m6	90	593	16	59	115	160h6	155h6	90	2.5	92.5	605	34	555	495h7	9±1.5	224	510	20	26	520
13	83000	70m6	120	714	20	74.5	140	180g6	175g6	95	2.5	97.5	645	39	595	535h7	11±1.5	241	554	24	26	660
14	117000	70m6	120	737	20	74.5	140	210g6	205g6	105	2.5	107.5	720	42	665	610h7	9	278	629	32	26	920
16	160000	80m6	140	851	22	85	170	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1150
17	202000	80m6	140	877	22	85	170	250g6	245g6	120	2.5	122.5	895	50	830	750h7	10	294	775	24	33	1650
18	244000	90m6	160	1006	25	95	200	260g6	255g6	120	2.5	122.5	930	50	865	785h7	10	303	815	32	33	1950
19	295000	90m6	160	1029.5	25	95	200	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2400
20	354000	90m6	160	1029.5	25	95	200	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2500
21	392000	100m6	180	1076	28	106	230	310g6	305g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2900
22	450000	100m6	180	1076	28	106	230	330g6	325g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	3100
23	513000	120n6	210	1175	32	127	265	350g6	345g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3800
24	592000	120n6	210	1175	32	127	265	360g6	355g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	4100
25	684000	130n6	210	1291	32	137	300	380g6	375g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	4950
26	763000	130n6	210	1291	32	137	300	400g6	395g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5350
27	852000	140n6	240	1429	36	148	320	430g6	425g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6800
28	950000	140n6	240	1429	36	148	320	450g6	445g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	7200
29	1060000	150n6	240	1507	36	158	360	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8500
30	1200000	150n6	240	1507	36	158	360	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	9000
31	1330000	160n6	270	1662	40	169	400	480g6	470g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	10500
32	1500000	160n6	270	1662	40	169	400	510g6	500g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	11200
33	1680000	170n6	270	1743	40	179	400	530g6	520g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	12700
34	1920000	170n6	270	1743	40	179	400	570g6	560g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	13500
35	2240000	180n6	310	1960	45	190	442	600g6	590g6	272	5	277	1945	112	1825	1685h7	40	656	1720	40	62	17800
36	2600000	180n6	310	1960	45	190	442	640g6	630g6	272	5	277	1945	112	1825	1685h7	40	656	1720	40	62	18900

1) 轴伸d1中心孔, 见第36页。

2) 所需安装空间。

3) 请注意联接螺栓和凸缘。

4) 不包括锁紧盘和润滑油的重量。

1) For shaft end d1 with centre hole, see page 36

2) Space required.

3) Observe bolted connection and boss.

4) Weight without shrink disk and oil.

传动比, 转速, 功率

Ratio, Speed, Power Rating

类型 RP2S..

Type RP2S..

传动比 $i_N$ , 转速 $n_1$ 和 $n_2$ , 额定功率 $P_N$  / Ratio  $i_N$ , speeds  $n_1$  and  $n_2$ , nominal power ratings  $P_N$

$i_N$	$n_1$ r/min	$n_2$	齿轮箱规格 / Gear unit 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						
			额定功率 $P_N$ kW / Nominal power ratings $P_N$ in kW																																
45	1500	33.3	77	108	147	209	290	408	558	705	852	1030	1236	1368	1571	1790	2068	2387	2663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	22.2	51	72	98	140	193	272	372	470	568	686	824	912	1047	1194	1377	1592	1775	1982	2210	2466	2792	3095	3490	3909	4467	5212	6060	-	-	-	-	-	
	750	16.7	38	53	73	105	145	204	279	353	426	515	618	684	785	895	1033	1194	1332	1487	1658	1850	2094	2321	2618	2932	3351	3909	4537	-	-	-	-	-	
50	1500	30.0	69	97	132	188	261	368	503	635	766	927	1112	1231	1414	1611	1860	2149	2397	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	20.0	46	65	88	126	174	245	335	423	511	618	741	821	942	1074	1240	1432	1598	1784	1989	2220	2513	2785	3141	3518	4021	4691	5445	-	-	-	-	-	
	750	15.0	35	49	66	94	130	184	251	317	383	463	556	616	707	806	930	1074	1198	1338	1492	1665	1885	2089	2356	2639	3016	3518	4084	-	-	-	-	-	
56	1500	26.8	62	87	118	165	233	328	449	567	684	827	993	1099	1262	1439	1660	1918	2140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	17.9	41	58	79	112	155	219	299	378	456	552	662	733	841	959	1107	1279	1427	1593	1776	1982	2244	2487	2805	3141	3590	4188	4861	-	-	-	-	-	
	750	13.4	31	43	59	84	116	164	224	283	342	414	496	560	631	719	830	959	1070	1195	1332	1486	1683	1865	2103	2356	2692	3141	3646	-	-	-	-	-	
63	1500	23.8	55	77	105	150	207	292	398	504	608	735	883	977	1122	1279	1478	1705	1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	15.9	37	52	70	100	138	194	266	336	406	490	588	651	748	853	984	1137	1268	1416	1579	1762	1994	2210	2493	2792	3171	3723	4321	-	-	-	-	-	
	750	11.9	27	39	52	75	103	146	199	252	304	368	441	489	561	639	738	853	951	1062	1184	1321	1496	1658	1870	2094	2393	2792	3241	-	-	-	-	-	
71	1500	21.1	49	69	93	133	184	259	354	447	540	653	783	887	995	1135	1310	1513	1688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	14.1	32	46	62	88	122	173	236	298	360	435	522	578	664	757	873	1009	1125	1256	1401	1563	1770	1961	2212	2478	2831	3303	3834	-	-	-	-	-	
	750	10.6	24	34	46	66	92	129	177	223	270	336	392	434	498	567	655	757	844	942	1051	1172	1327	1471	1659	1858	2124	2478	2876	-	-	-	-	-	
80	1500	18.8	43	61	82	118	163	230	314	397	479	579	705	770	883	1007	1162	1343	1498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	12.5	29	41	50	79	109	153	209	264	319	385	463	513	589	671	775	895	999	1115	1243	1387	1571	1741	1963	2199	2513	2932	3403	-	-	-	-	-	
	750	9.4	22	30	41	59	81	115	157	198	240	290	347	385	442	504	581	671	749	836	933	1041	1178	1306	1472	1649	1885	2199	2552	-	-	-	-	-	
90	1500	16.7	38	54	73	105	145	204	279	353	426	515	618	684	785	895	1033	1194	1332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	11.1	26	36	49	70	97	136	186	235	284	343	412	456	524	597	689	796	888	991	1105	1233	1396	1547	1745	1954	2234	2606	3025	-	-	-	-	-	
	750	8.3	19	27	37	52	72	102	140	176	213	257	309	342	393	448	517	597	686	743	829	925	1047	1160	1309	1486	1675	1954	2289	-	-	-	-	-	
100	1500	15.0	35	49	66	94	130	184	251	317	383	463	556	616	707	806	930	1074	1198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	10.0	23	32	44	63	87	123	168	212	255	309	371	410	471	537	620	716	799	892	995	1110	1256	1393	1571	1759	2010	2345	2722	-	-	-	-	-	
	750	7.5	17	24	33	47	65	92	126	159	192	232	278	308	353	403	465	537	599	669	746	832	942	1044	1178	1319	1508	1759	2042	-	-	-	-	-	
112	1500	13.4	31	43	59	84	116	164	224	283	342	414	496	550	631	719	830	959	1070	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	8.9	21	29	39	56	78	109	150	189	228	276	331	366	421	480	553	639	713	797	888	991	1122	1243	1402	1571	1795	2094	2431	-	-	-	-	-	
	750	6.7	15	22	29	42	58	82	112	142	171	207	248	275	316	360	415	480	535	597	666	743	841	933	1052	1178	1346	1571	1823	-	-	-	-	-	
125	1500	12.0	28	39	53	75	104	147	201	254	307	371	445	493	565	645	744	859	959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	8.0	18	26	35	50	70	98	134	169	204	247	297	328	377	430	496	573	633	714	796	888	1005	1114	1258	1407	1608	1876	2178	-	-	-	-	-	
	750	6.0	14	19	26	38	52	74	101	127	153	185	222	246	283	322	372	430	479	535	597	666	754	836	942	1055	1206	1407	1633	-	-	-	-	-	

-- 敬请垂询

-- On request

热容量  $P_{G1}$  kW / Thermal capacities  $P_{G1}$  in kW \*)

	齿轮箱规格 / Gear unit 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																		
	热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW																																			
1) $P_{G1}$ 室内小空间安装 $P_{G1}$ for small confined spaces	15	20	24	32	36	49	56	69	75	89	106	130	151	182	215	245	275	328	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2) $P_{G1}$ 室内大空间安装 $P_{G1}$ for large halls, workshops etc.	22	28	34	45	52	69	79	97	106	127	151	185	214	257	305	347	389	464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) $P_{G1}$ 室外安装 $P_{G1}$ in the open	29	38	45	60	70	94	107	132	143	171	204	250	289	348	412	469	527	628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*)表中数值适用于卧式安装。对于其它安装位置  
请与我们联系

\*) Values apply to horizontal mounting position.  
For other mounting positions please refer to us.

- 1) 风速  $\geq 0.5m/s$
- 2) 风速  $\geq 1.4m/s$
- 3) 风速  $\geq 3.7m/s$

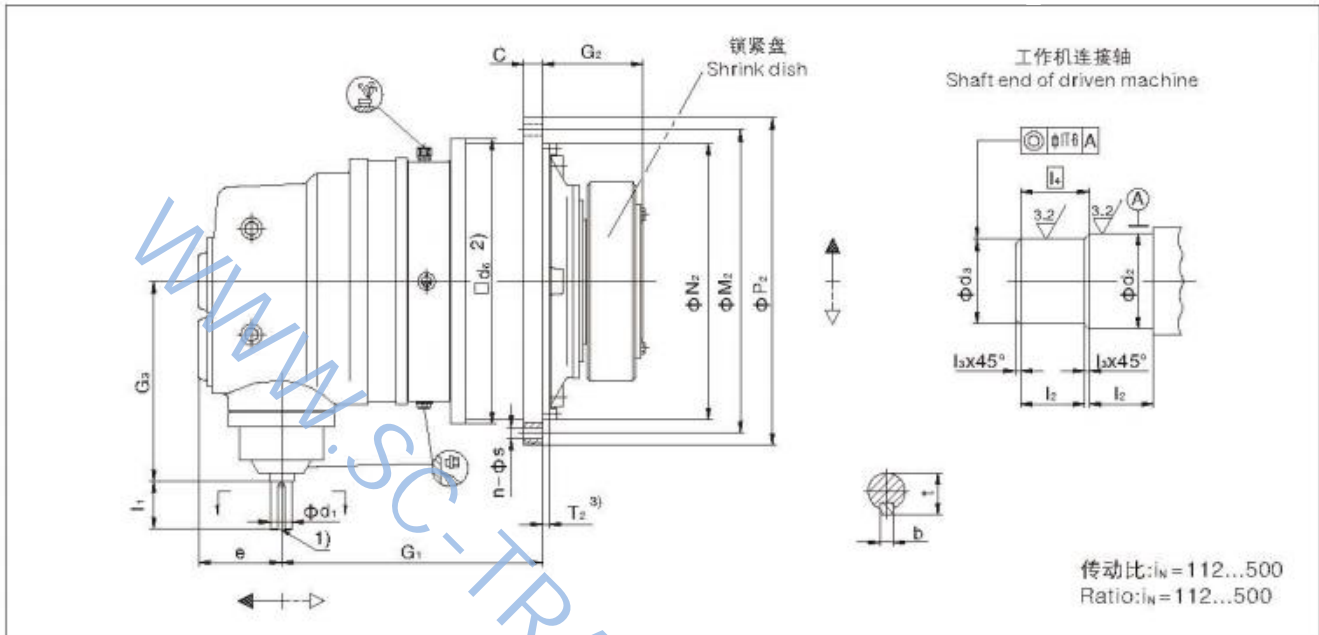
- 1) Wind velocity  $\geq 0.5m/s$
- 2) Wind velocity  $\geq 1.4m/s$
- 3) Wind velocity  $\geq 3.7m/s$

## 外形尺寸和重量

类型 RP2KA..

## Dimension and Weight

Type RP2KA..



RP2KA.. 规格 Size	额定输出扭矩 Nominal Output Torques T <sub>2N</sub> Nm	输入轴尺寸(mm) Input shaft Dimension (mm)													法兰孔尺寸 Flange bolts			重量 Weight (kg) 4)											
		i <sub>N</sub> ≤ 360				i <sub>N</sub> ≥ 400				G <sub>1</sub>	G <sub>3</sub>	e	d <sub>2</sub>	d <sub>s</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>		P <sub>2</sub>	C	M <sub>2</sub>	N <sub>2</sub>	T <sub>2</sub>	G <sub>2</sub>	d <sub>e</sub>	n	s		
		d <sub>1</sub>	l <sub>1</sub>	b	t	d <sub>1</sub>	l <sub>1</sub>	b	t																				
9	22000	30m6	70	8	33	25m6	60	8	28	339	320	119	120h6	115h6	65	2.5	67.5	428	24	388	350h7	6±1.5	165	356	24	18	270		
10	31000	30m6	70	8	33	25m6	60	8	28	359	320	119	130h6	125h6	70	2.5	72.5	472	28	436	394h7	8±1.5	174	400	28	18	320		
11	42000	35m6	80	10	38	28m6	60	8	31	419	375	137	140h6	135h6	82.5	2.5	85	525	32	485	425h7	8±1.5	204	436	20	22	390		
12	60000	35m6	80	10	38	28m6	60	8	31	433	375	137	160h6	155h6	90	2.5	92.5	605	34	555	495h7	9±1.5	224	510	20	26	540		
13	83000	45m6	100	14	48.5	35m6	80	10	38	518.5	445	172	180g6	175g6	95	2.5	97.5	645	39	595	535h7	11±1.5	241	554	24	26	690		
14	117000	45m6	100	14	48.5	35m6	80	10	38	541.5	445	172	210g6	205g6	105	2.5	107.5	720	42	665	610h7	9	278	629	32	26	950		
16	160000	55m6	110	16	59	40m6	100	12	43	632	520	194	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1200		
17	202000	55m6	110	16	59	40m6	100	12	43	658	520	194	250g6	245g6	120	2.5	122.5	895	50	830	750h7	10	294	775	24	33	1700		
18	244000	70m6	135	20	74.5	50m6	110	14	53.5	741.5	615	240	260g6	255g6	120	2.5	122.5	930	50	865	785h7	10	303	845	32	33	2010		
19	295000	70m6	135	20	74.5	50m6	110	14	53.5	764.5	615	240	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2470		
20	354000	70m6	135	20	74.5	50m6	110	14	53.5	764.5	615	240	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2550		
21-26		敬请垂询 / On request																											

- 1) 轴伸d1中心孔, 见第36页。
- 2) 所需安装空间。
- 3) 请注意联接螺栓和凸缘。
- 4) 不包括锁紧盘和润滑油的重量。

- 1) For shaft end d<sub>1</sub> with centre hole, see page 36
- 2) Space required.
- 3) Observe bolted connection and boss.
- 4) Weight without shrink disk and oil.



传动比, 转速, 功率

Ratio, Speed, Power Rating

类型 RP2K..

Type RP2K..

传动比 $i_N$ , 转速 $n_1$ 和 $n_2$ , 额定功率 $P_N$ / Ratio $i_N$ , speeds $n_1$ and $n_2$ , nominal power ratings $P_N$													
$i_N$	$n_1$	$n_2$	齿轮箱规格 / Gear unit sizes										
			9	10	11	12	13	14	16	17	18	19	20
			额定功率 $P_N$ kW / Nominal power ratings $P_N$ in kW										
r/min													
112	1500	13.4	30.9	43.6	59.0	84	117	164	225	284	343	415	498
	1000	8.9	20.8	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	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	10.3	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	28	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	74
	750	1.5	3.5	4.9	6.6	9	13	18	25	32	38	46	56
560	敬请垂询 / On request												

热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW *)											
	齿轮箱规格 / Gear unit sizes										
	9	10	11	12	13	14	16	17	18	19/20	
	热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW										
1) $P_{G1}$ 室内小空间安装 $P_{G1}$ for small confined spaces	12	15	18	24	28	38	44	53	58	69	
2) $P_{G1}$ 室内大空间安装 $P_{G1}$ for large halls, workshops etc.	17	22	26	35	40	54	62	76	82	98	
3) $P_{G1}$ 室外安装 $P_{G1}$ in the open	23	29	35	47	54	73	83	102	111	133	

\*)表中数值适用于卧式安装。对于其它安装位置请与我们联系

\*) Values apply to horizontal mounting position. For other mounting positions please refer to us.

- 1) 风速  $\geq 0.5\text{m/s}$
- 2) 风速  $\geq 1.4\text{m/s}$
- 3) 风速  $\geq 3.7\text{m/s}$

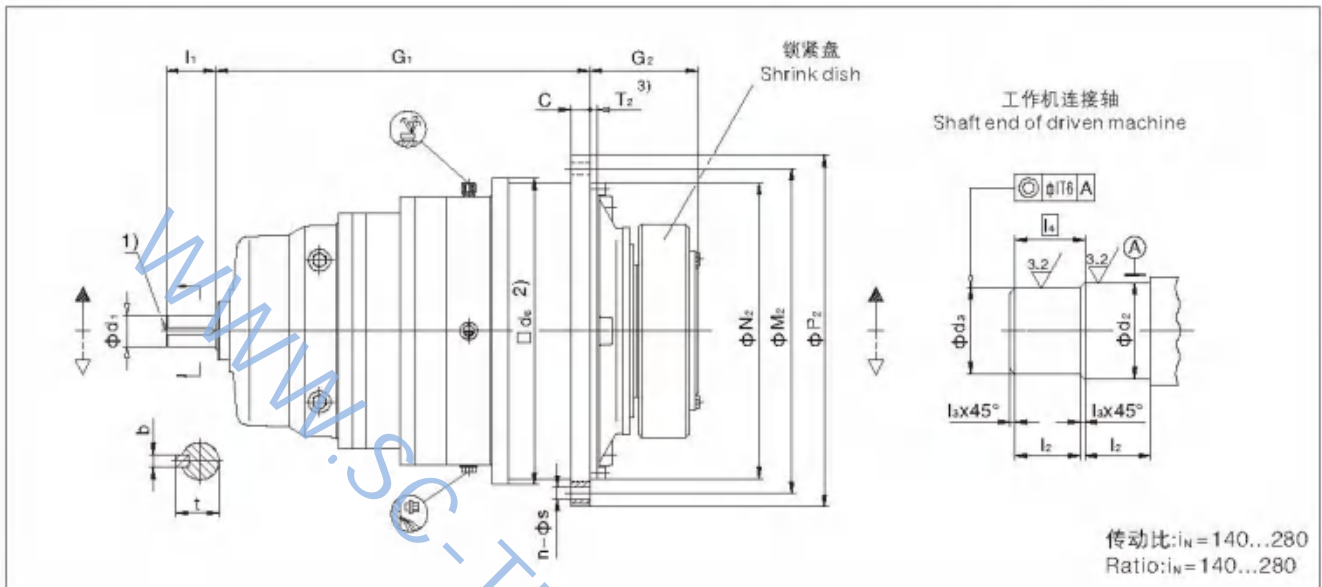
- 1) Wind velocity  $\geq 0.5\text{m/s}$
- 2) Wind velocity  $\geq 1.4\text{m/s}$
- 3) Wind velocity  $\geq 3.7\text{m/s}$

外形尺寸和重量

类型 RP3NA..

Dimension and Weight

Type RP3NA..



传动比:  $i_w = 140 \dots 280$   
Ratio:  $i_w = 140 \dots 280$

IRP3NA.. 规格 Size	额定输出扭矩 Nominal Output Torques $T_{2N}$ Nm	输入轴尺寸 (mm) Input shaft Dimension (mm)					$d_2$	$d_3$	$z$	$l_z$	$l_a$	$P_2$	$C$	$M_2$	$N_2$	$T_2$	$G_2$	$d_6$	法兰孔尺寸 Flange bolts		重量 Weight (kg) 4)
		$d_1$	$l_1$	$G_1$	$b$	$t$													$n$	$s$	
9	22000	55m6	90	565	16	59	120h6	115h6	65	2.5	67.5	428	24	388	350h7	6±1.5	165	356	24	18	250
10	31000	55m6	90	585	16	59	130h6	125h6	70	2.5	72.5	472	28	436	394h7	8±1.5	174	400	28	18	300
11	42000	55m6	90	616	16	59	140h6	135h6	82.5	2.5	85	525	32	485	425h7	8±1.5	204	436	20	22	370
12	60000	55m6	90	6630	16	59	160h6	155h6	90	2.5	92.5	605	24	555	495h7	9±1.5	224	510	20	26	500
13	83000	55m6	90	688	16	59	180g6	175g6	95	2.5	97.5	645	39	595	535h7	11±1.5	241	554	24	26	620
14	117000	55m6	90	711	20	59	210g6	205g6	105	2.5	107.5	720	42	665	610h7	9	278	629	32	26	680
16	160000	70m6	120	853	20	74.5	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1100
17	202000	70m6	120	879	22	74.5	250g6	245g6	120	2.5	122.5	895	50	830	750h7	10	294	775	24	33	1580
18	244000	80m6	140	1013.5	22	85	260g6	255g6	120	2.5	122.5	930	50	865	785h7	10	303	815	32	33	2000
19	295000	80m6	140	1036.5	22	85	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2100
20	354000	80m6	140	1036.5	22	85	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2200
21	392000	80m6	140	1093	22	85	310g6	305g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2785
22	450000	80m6	140	1093	22	85	330g6	325g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2950
23	513000	95m6	160	1222	25	100	350g6	345g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3625
24	592000	95m6	160	1222	25	100	360g6	355g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	4100
25	684000	95m6	160	1284.5	25	100	380g6	375g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5000
26	763000	95m6	160	1284.5	25	100	400g6	395g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5400
27	852000	110n6	180	1470	28	116	430g6	425g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6400
28	950000	110n6	180	1470	28	116	450g6	445g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6875
29	1060000	110n6	180	1516.5	28	116	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8190
30	1200000	110n6	180	1516.5	28	116	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8715
31	1330000	120n6	210	1585	32	127	480g6	470g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	10700
32	1500000	120n6	210	1585	32	127	510g6	500g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	11200
33	1680000	130n6	210	1710	32	137	530g6	520g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	12950
34	1920000	130n6	210	1710	32	137	570g6	560g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	13800
35+36																					敬请垂询 / On request

1) 轴伸d1中心孔, 见第36页。  
2) 所需安装空间。  
3) 请注意联接螺栓和凸缘。  
4) 不包括锁紧盘和润滑油的重量。

1) For shaft end  $d_1$  with centre hole, see page 36  
2) Space required.  
3) Observe bolted connection and boss.  
4) Weight without shrink disk and oil.



传动比, 转速, 功率

Ratio, Speed, Power Rating

类型 IRP3N..

Type RP3N..

传动比 $i_N$ , 转速 $n_1$ 和 $n_2$ , 额定功率 $P_N$ / Ratio $i_N$ , speeds $n_1$ and $n_2$ , nominal power ratings $P_N$																																			
$i_N$	$n_1$ r/min	$n_2$	齿轮箱规格 / Gear unit 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						
			额定功率 $P_N$ kW / Nominal power ratings $P_N$ in kW																																
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	21.1	30.6	41.4	59	82	115	158	199	241	291	349	386	444	506	584	674	752	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	6.3	14.5	20.4	27.9	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	183	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	110	127	144	167	193	215	240	268	299	338	375	422	473	541	631	732	-	-	-	-	-	

- = 敬请重询

- = On request

热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW *)																			
	齿轮箱规格 / Gear unit 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	
	热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW																		
1) $P_{G1}$ 室内小空间安装 $P_{G1}$ for small confined spaces	14	18	22	29	34	46	52	64	70	83	99	121	141	169	200	228	256	305	
2) $P_{G1}$ 室内大空间安装 $P_{G1}$ for large halls, workshops etc.	20	26	31	41	48	64	74	91	99	118	140	172	199	240	284	323	362	432	
3) $P_{G1}$ 室外安装 $P_{G1}$ in the open	28	35	42	56	65	87	100	123	133	159	190	233	269	324	384	437	490	585	

\*)表中数值适用于卧式安装。对于其它安装位置请与我们联系

\*) Values apply to horizontal mounting position. For other mounting positions please refer to us.

- 1) 风速  $\geq 0.5$ m/s
- 2) 风速  $\geq 1.4$ m/s
- 3) 风速  $\geq 3.7$ m/s

- 1) Wind velocity  $\geq 0.5$ m/s
- 2) Wind velocity  $\geq 1.4$ m/s
- 3) Wind velocity  $\geq 3.7$ m/s

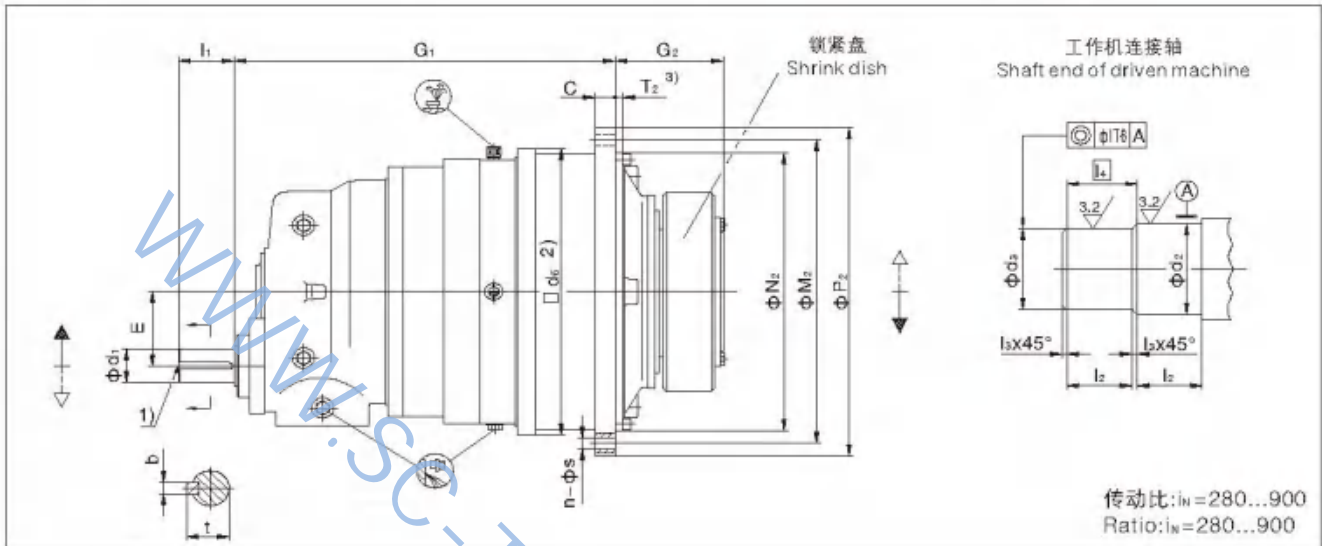


外形尺寸和重量

类型 JRP3SA..

Dimension and Weight

Type JRP3SA..



JRP3SA.. 规格 Size	额定输出扭矩 Nominal Output Torques T <sub>2N</sub> Nm	输入轴尺寸(mm) Input shaft Dimension (mm)						d <sub>2</sub>	d <sub>3</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	P <sub>2</sub>	C	M <sub>2</sub>	N <sub>2</sub>	T <sub>2</sub>	G <sub>2</sub>	d <sub>e</sub>	法兰孔尺寸 Flange bolts		重量 Weight (kg) 4)
		d <sub>1</sub>	l <sub>1</sub>	G <sub>1</sub>	b	t	E													n	s	
9	22000	38m6	60	585	10	41	90	120h6	115h6	65	2.5	67.5	428	24	388	350h7	6±1.5	165	356	24	18	270
10	31000	38m6	60	585	10	41	90	130h6	125h6	70	2.5	72.5	472	28	436	394h7	8±1.5	174	400	28	18	320
11	42000	38m6	60	616	10	41	90	140h6	135h6	82.5	2.5	85	525	32	485	425h7	8±1.5	204	436	20	22	390
12	60000	38m6	60	630	10	41	90	160h6	155h6	90	2.5	92.5	605	34	555	495h7	9±1.5	224	510	20	26	540
13	83000	38m6	60	688	10	41	90	180g6	175g6	95	2.5	97.5	645	39	595	535h7	11±1.5	241	554	24	26	670
14	117000	38m6	60	711	10	41	90	210g6	205g6	105	2.5	107.5	720	42	665	610h7	9	278	629	32	26	930
16	160000	55m6	90	853	16	59	115	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1115
17	202000	55m6	90	879	16	59	115	250g6	245g6	120	2.5	122.5	895	50	837	750h7	10	294	775	24	33	1625
18	244000	70m6	120	1013.5	20	74.5	140	260g6	255g6	120	2.5	122.5	930	50	865	785h7	10	303	815	32	33	2060
19	295000	70m6	120	1036.5	20	74.5	140	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2160
20	354000	70m6	120	1036.5	20	74.5	140	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2260
21	392000	70m6	120	1093	20	74.5	140	310g6	305g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2870
22	450000	70m6	120	1093	20	74.5	140	330g6	325g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	3040
23	513000	80m6	140	1222	22	85	170	350g6	345g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3730
24	592000	80m6	140	1222	22	85	170	360g6	355g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	4220
25	684000	80m6	140	1284	22	85	170	380g6	375g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5150
26	763000	80m6	140	1284	22	85	170	400g6	395g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5560
27	852000	90m6	160	1470	25	95	200	430g6	425g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6580
28	950000	90m6	160	1470	25	95	200	450g6	445g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	7080
29	1060000	90m6	160	1516.5	25	95	200	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8400
30	1200000	90m6	160	1516.5	25	95	200	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8970
31	1330000	100m6	180	1617	28	106	230	480g6	470g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	11000
32	1500000	100m6	180	1617	28	106	230	510g6	500g6	232	5	237	1665	94	1545	1400h7	36	538	1443	32	62	11500
33	1680000	120n6	210	1735	32	127	265	530g6	520g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	13300
34	1920000	120n6	210	1735	32	127	265	570g6	560g6	242	5	247	1755	100	1635	1495h7	36	573	1536	36	62	14200
35+36		敬请垂询 / On request																				

- 1) 轴伸d1中心孔, 见第36页。
- 2) 所需安装空间。
- 3) 请注意联接螺栓和凸缘。
- 4) 不包括锁紧盘和润滑油的重量。

- 1) For shaft end d<sub>1</sub> with centre hole, see page 36
- 2) Space required.
- 3) Observe bolted connection and boss.
- 4) Weight without shrink disk and oil.

传动比, 转速, 功率

Ratio, Speed, Power Rating

类型 RP3S..

Type RP3S..

传动比  $i_N$ , 转速  $n_1$  和  $n_2$ , 额定功率  $P_N$  / Ratio  $i_N$ , speeds  $n_1$  and  $n_2$ , nominal power ratings  $P_N$

$i_N$	$n_1$ r/min	$n_2$	齿轮箱规格 / Gear unit 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					
			额定功率 $P_N$ kW / Nominal power ratings $P_N$ in kW																															
280	1500	5.4	3.5	17.6	24	34	47	67	91	115	139	168	202	223	258	292	337	389	434	485	541	603	663	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	506	569	638	729	850	987					
	750	2.4	6.7	8.8	12	17	24	33	46	57	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	18	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	588	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	180	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	308	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	478	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	26	36	45	55	66	79	88	101	115	133	154	171	191	213	238	269	299	337	377	431	503	584					
	1000	1.4	3.3	4.5	6.3	9	12	18	24	30	37	44	53	59	67	77	89	102	114	128	142	159	180	199	224	251	287	335	389					
	750	1.1	2.5	3.5	4.7	7	9	13	18	23	27	33	40	44	51	56	66	77	86	96	107	119	135	149	168	189	215	251	292					
800	1500	1.9	4.4	6.2	8.4	12	17	23	32	40	49	59	71	78	90	102	113	136	152	170	189	211	239	265	299	335	383	446	518					
	1000	1.3	2.9	4.1	5.6	8	11	16	21	27	32	39	47	52	60	68	79	91	110	113	126	141	159	177	199	223	255	296	345					
	750	0.9	2.2	3.1	4.2	6	8	12	16	20	24	29	35	39	45	51	59	68	76	85	95	106	120	132	149	167	191	223	259					
900	1500	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					
	1000	1.1	2.6	3.7	5	7	10	14	19	24	29	35	42	46	53	61	70	81	90	101	112	125	142	157	177	198	227	264	307					
	750	0.8	1.9	2.7	3.7	5	7	10	14	18	22	28	31	35	40	45	52	61	68	75	84	94	106	118	133	149	170	198	230					

-- = 敬请垂询

-- = On request

热容量  $P_{G1}$ , kW / Thermal capacities  $P_{G1}$  in kW \*)

	齿轮箱规格 / Gear unit 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														
	热容量 $P_{G1}$ , kW / Thermal capacities $P_{G1}$ in kW																															
1) $P_{G1}$ 室内小空间安装 $P_{G1}$ for small confined spaces	12	15	18	24	28	40	43	53	57	69	82	100	116	139	165	188	211	252														
2) $P_{G1}$ 室内大空间安装 $P_{G1}$ for large halls, workshops etc.	17	21	26	34	40	53	61	75	81	97	116	142	164	197	234	266	298	356														
3) $P_{G1}$ 室外安装 $P_{G1}$ in the open	23	29	35	46	54	72	82	101	110	131	156	192	222	267	316	360	404	482														

\*)表中数值适用于卧式安装。对于其它安装位置请与我们联系

\*) Values apply to horizontal mounting position. For other mounting positions please refer to us.

- 1) 风速  $\geq 0.5m/s$
- 2) 风速  $\geq 1.4m/s$
- 3) 风速  $\geq 3.7m/s$

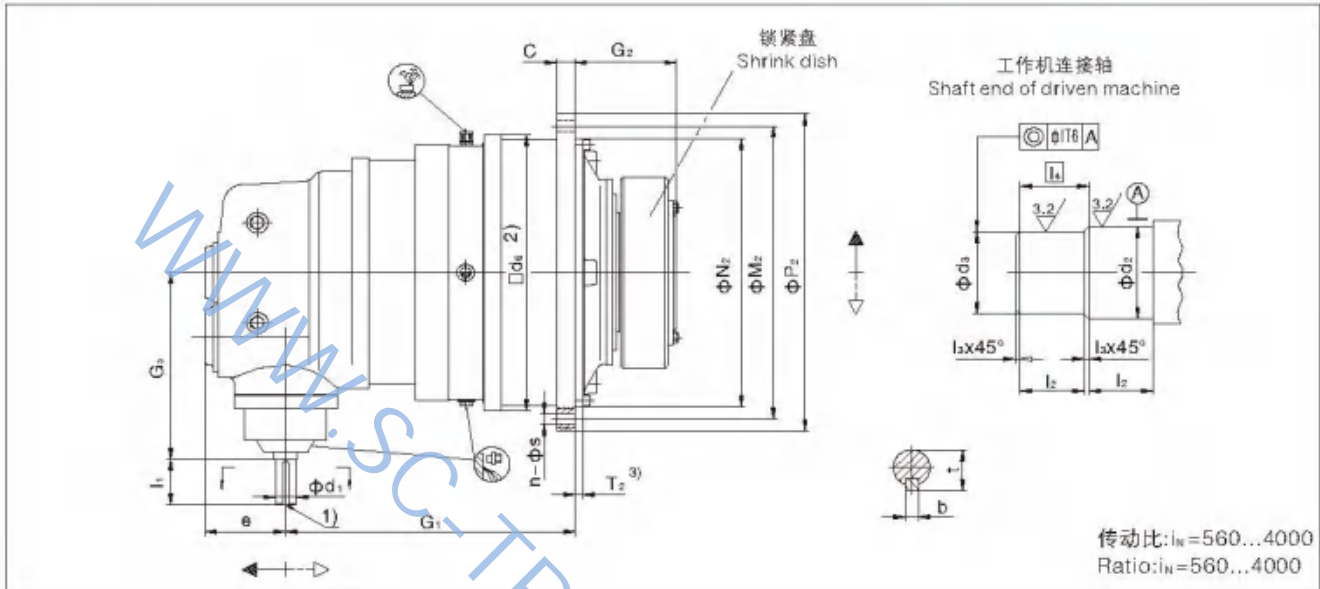
- 1) Wind velocity  $\geq 0.5m/s$
- 2) Wind velocity  $\geq 1.4m/s$
- 3) Wind velocity  $\geq 3.7m/s$

外形尺寸和重量

类型 JRP3KA..

Dimension and Weight

Type JRP3KA..



RP3KA.. 规格 Size	额定输出扭矩 Nominal Output Torques $T_{2N}$ Nm	输入轴尺寸(mm) Input shaft Dimension (mm)																重量 Weight (kg) 4)									
		$i_N \leq 2000$								$i_N \geq 2240$																	
		$d_1$	$l_1$	b	t	$d_1$	$l_1$	b	t	$G_1$	$G_2$	e	$d_2$	$d_3$	$l_2$	$l_3$	$l_4$		$P_2$	C	$M_2$	$N_2$	$T_2$	$G_2$	$d_6$	n	s
9	22000	30m6	70	8	33	25m6	60	8	28	435	320	119	120h6	115h6	60	2.5	67.5	428	24	388	350h7	6±1.5	165	356	24	18	280
10	31000	30m6	70	8	33	25m6	60	8	28	435	320	119	130h6	125h6	70	2.5	72.5	472	28	436	394h7	8±1.5	174	400	28	18	330
11	42000	30m6	70	8	33	25m6	60	8	28	486	320	119	140h6	135h6	82.5	2.5	84	525	32	485	425h7	8±1.5	204	436	20	22	390
12	60000	30m6	70	8	33	25m6	60	8	28	500	320	119	160h6	155h6	90	2.5	92.5	605	34	555	495h7	9±1.5	224	510	20	26	530
13	83000	30m6	70	8	33	25m6	60	8	28	558	320	119	180g6	175g6	95	2.5	97.5	645	39	595	535h7	11±1.5	241	554	24	26	670
14	117000	30m6	70	8	33	25m6	60	8	28	581	320	119	210g6	205g6	105	2.5	107.5	720	42	635	610h7	9	278	629	32	26	940
16	160000	35m6	80	10	38	28m6	60	8	31	693	375	137	230g6	225g6	110	2.5	112.5	770	44	715	660h7	10	285	680	36	26	1137
17	202000	35m6	80	10	38	28m6	60	8	31	719	375	137	250g6	245g6	120	2.5	122.5	895	50	830	750h7	10	294	775	24	33	1660
18	244000	45m6	100	14	48.5	35m6	80	10	38	818	445	172	260g6	255g6	120	2.5	122.5	930	50	865	765h7	10	303	815	32	33	2100
19	295000	45m6	100	14	48.5	35m6	80	10	38	841	445	172	280g6	275g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2200
20	354000	45m6	100	14	48.5	35m6	80	10	38	841	445	172	300g6	295g6	135	2.5	137.5	980	56	915	840h7	12	327.5	870	36	33	2300
21	392000	45m6	100	14	48.5	35m6	80	10	38	897.5	445	172	310g6	305g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	2930
22	450000	45m6	100	14	48.5	35m6	80	12	38	897.5	445	172	330g6	325g6	152	2.5	154.5	1115	62	1025	935h7	24	354	960	32	39	3100
23	513000	55m6	110	16	59	40m6	100	12	43	1003	520	194	350g6	345g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	3800
24	592000	55m6	110	16	59	40m6	100	12	43	1003	520	194	360g6	355g6	164	2.5	166.5	1210	68	1120	1025h7	28	380	1056	36	39	4300
25	684000	55m6	110	16	59	40m6	100	12	43	1065.5	520	194	380g6	375g6	180	2.5	182.5	1320	74	1220	1115h7	29	407	1150	36	45	5250
26	783000	55m6	110	16	59	40m6	100	14	43	1065.5	520	194	400g6	395g6	180	2.5	182.5	1320	74	1220	1115h7	31	407	1150	36	45	5660
27	852000	70m6	135	20	74.5	50m6	110	14	53.5	1205.5	615	240	430g6	425g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	6680
28	950000	70m6	135	20	74.5	50m6	110	14	53.5	1205.5	615	240	450g6	445g6	191	2.5	193.5	1460	81	1345	1215h7	31	453	1248	32	52	7180
29	1060000	70m6	135	20	74.5	50m6	110	14	53.5	1252	615	240	460g6	450g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	8500
30	1200000	70m6	135	20	74.5	50m6	110	14	53.5	1252	615	240	480g6	470g6	197.5	5	202.5	1565	87	1450	1320h7	34	483	1355	36	52	9070
31~36		敬请垂询 / On request																									

- 1) 轴伸d1中心孔, 见第36页。
- 2) 所需安装空间。
- 3) 请注意联接螺栓和凸缘。
- 4) 不包括锁紧盘和润滑油的重量。

- 1) For shaft end  $d_1$  with centre hole, see page 36
- 2) Space required.
- 3) Observe bolted connection and boss.
- 4) Weight without shrink disk and oil.

传动比, 转速, 功率

Ratio, Speed, Power Rating

类型 RP3K..

Type RP3K..

传动比 $i_n$ , 转速 $n_1$ 和 $n_2$ , 额定功率 $P_N$  / Ratio  $i_n$ , speeds  $n_1$  and  $n_2$ , nominal power ratings  $P_N$

$i_n$	$n_1$ $n_2$ r/min	齿轮箱规格 / Gear unit sizes																														
		9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31-36									
		额定功率 $P_N$ kW / Nominal power ratings $P_N$ in kW																														
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	4.1	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	30	39	48	51	56	64	73	84	98	109	122	136	151	171									
630	1500	2.38	5.8	7.8	11	15	21	30	41	51	62	75	90	99	114	130	150	174	194	218	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	109	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	52	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	43	47	53	60									
1800	1500	0.83	2.0	2.8	3.7	5	7	10	14	18	22	26	31	35	40	46	53	61	68	76	84	94	107									
	1000	0.56	1.3	1.8	2.5	4	5	7	9	12	14	17	21	23	27	30	35	40	45	50	56	63	71									
	750	0.42	1.0	1.4	1.9	2.7	3.7	5.2	7.1	9	11	13	16	17	20	23	26	30	34	38	42	47	53									
2000	1500	0.75	1.8	2.5	3.4	4.8	6.6	9.4	12.8	16	19	24	28	31	36	41	47	55	61	68	76	85	96									
	1000	0.50	1.2	1.7	2.2	3.2	4.4	6.2	8.5	11	13	16	19	21	24	27	32	36	41	45	51	56	64									
	750	0.38	0.9	1.2	1.7	2.4	3.3	4.7	6.4	8	10	12	14	16	18	20	24	27	30	34	38	42	48									
2240	1500	0.67	1.6	2.2	3.0	4.3	5.9	8.3	11.4	14	17	21	25	28	32	37	42	49	54	61	68	76	86									
	1000	0.45	1.0	1.5	2.0	2.9	3.9	5.6	7.6	10	12	14	17	19	21	24	28	33	36	41	45	50	57									
	750	0.33	0.8	1.1	1.5	2.1	3.0	4.2	5.7	7.2	8.7	10.5	12.6	14	16	18	21	24	27	30	34	38	43									
2500	1500	0.60	1.4	2.0	2.7	3.8	5.3	7.5	10.2	12.9	16	19	23	25	29	33	38	44	49	54	61	68	77									
	1000	0.40	0.9	1.3	1.8	2.6	3.5	5.0	6.8	8.6	10.4	12.6	15.1	17	19	22	25	29	33	36	40	45	51									
	750	0.30	0.7	1.0	1.3	1.9	2.7	3.7	5.1	6.5	7.8	9.4	11.3	13	14	16	19	22	24	27	30	34	38									
2800	1500	0.54	1.3	1.8	2.4	3.4	4.7	6.7	9.1	12	14	17	20	22	26	29	34	38	44	49	54	61	68									
	1000	0.36	0.8	1.2	1.6	2.3	3.2	4.5	6.1	7.7	9.3	11.2	13.5	15	17	20	22	26	29	32	36	40	46									
	750	0.27	0.6	0.9	1.2	1.7	2.4	3.3	4.6	5.8	7.0	8.4	10.1	11.2	13	15	17	20	22	24	27	30	34									
3150	1500	0.48	1.1	1.6	2.1	3.0	4.2	5.9	8.1	10.2	12	15	18	20	23	26	30	35	39	43	48	54	61									
	1000	0.32	0.7	1.0	1.4	2.0	2.8	4.0	5.4	6.8	8.3	10.0	12	13.3	15	17	20	23	26	29	32	36	41									
	750	0.24	0.6	0.8	1.1	1.5	2.1	3.0	4.1	5.1	6.2	7.5	9	9.9	11	13	15	17	19	22	24	27	30									
3550	1500	0.42	1.0	1.4	1.9	2.7	3.7	5.3	7.2	9.1	11	13	16	18	20	23	27	31	34	38	43	48	54									
	1000	0.28	0.7	0.9	1.3	1.8	2.5	3.5	4.8	6.1	7.3	8.9	10.6	11.8	14	15	18	21	23	26	29	32	36									
	750	0.21	0.5	0.7	0.9	1.4	1.9	2.6	3.6	4.5	5.5	6.6	8	8.8	10	12	13	15	17	19	21	24	27									
4000	1500	0.38	0.9	1.2	1.7	2.4	3.3	4.7	6.4	8.1	9.7	12	14	16	18	20	24	27	30	34	38	42	48									
	1000	0.25	0.6	0.8	1.1	1.6	2.2	3.1	4.3	5.4	6.5	7.9	9.4	10.4	12	14	16	18	20	23	26	28	32									
	750	0.19	0.4	0.6	0.8	1.2	1.7	2.3	3.2	4.0	4.9	5.9	7.1	7.8	9	10	12	14	15	17	19	21	24									

敬請垂詢 on request

热容量  $P_{G1}$  kW / Thermal capacities  $P_{G1}$  in kW \*)

	齿轮箱规格 / Gear unit sizes															
	9	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31-36
	热容量 $P_{G1}$ kW / Thermal capacities $P_{G1}$ in kW															
1) $P_{G1}$ 室内小、空间安装 $P_{G1}$ for small, confined spaces	10	12	15	20	23	31	35	43	47	56	67	82	95	109	125	敬請垂詢 on request
2) $P_{G1}$ 室内大、空间安装 $P_{G1}$ for large halls, workshops etc.	14	17	21	28	33	44	50	61	66	79	95	116	106	125	144	
3) $P_{G1}$ 室外安装 $P_{G1}$ in the open	19	24	28	38	44	59	67	83	90	107	128	157	166	195	225	

\*)表中数值适用于卧式安装。对于其它安装位置请与我们联系

\*) Values apply to horizontal mounting position. For other mounting positions please refer to us.

- 1) 风速  $\geq 0.5m/s$
- 2) 风速  $\geq 1.4m/s$
- 3) 风速  $\geq 3.7m/s$

- 1) Wind velocity  $\geq 0.5m/s$
- 2) Wind velocity  $\geq 1.4m/s$
- 3) Wind velocity  $\geq 3.7m/s$

RP 系列行星齿轮箱  
Series Planetary Gear Units

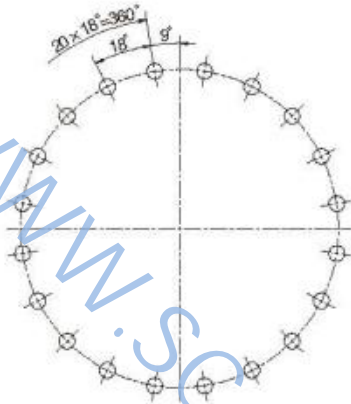
输出法兰孔布置图:

Hole Patterns on Output Flanges

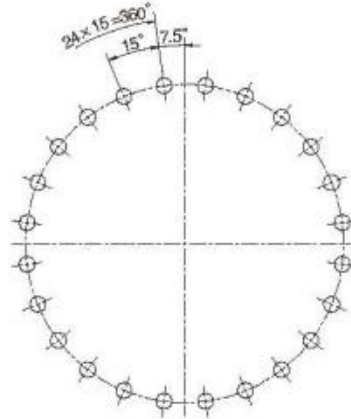


从输入轴端观察

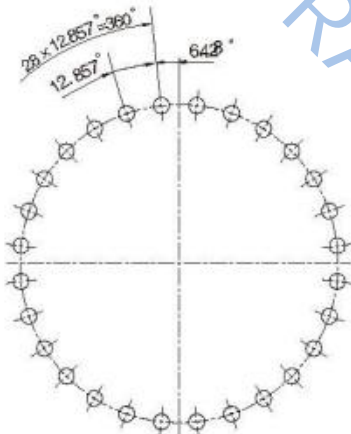
Viewing on input shaft



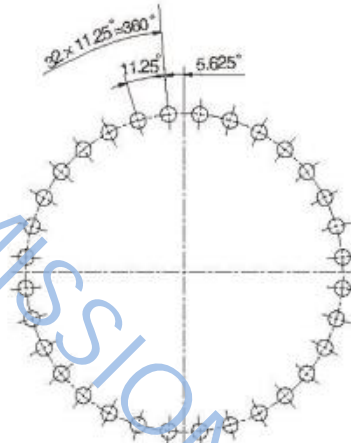
规格 / Size: 11, 12



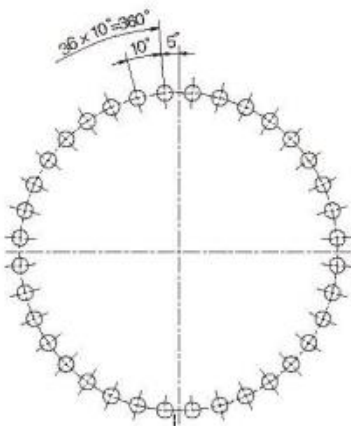
规格 / Size: 9, 13, 17



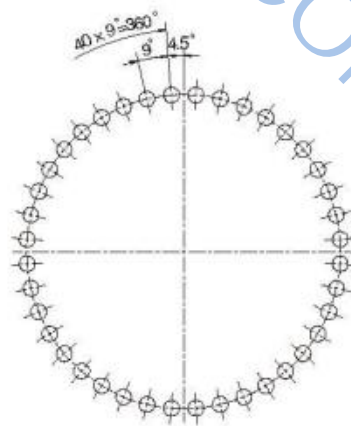
规格 / Size: 10



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

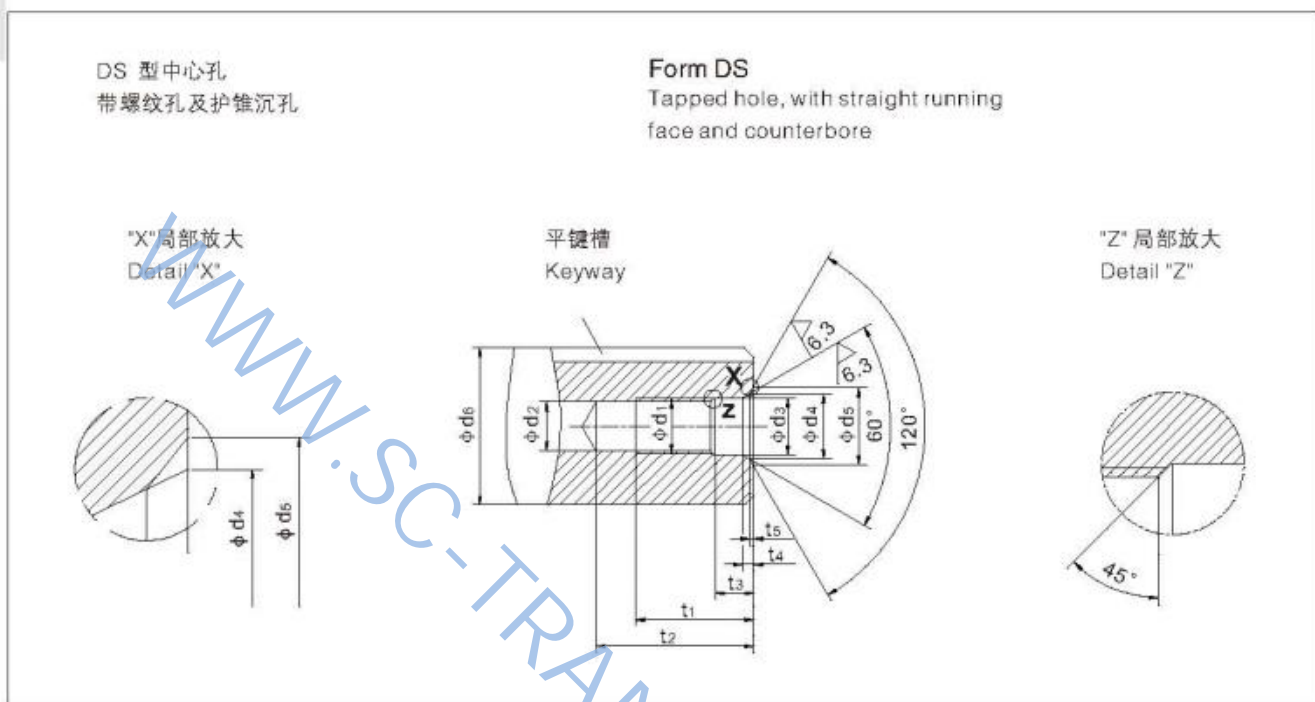


规格 / Size: 35, 36



DS型轴端中心孔

Centre Holes, Form DS On Shaft Ends



推荐直径 Recommended diameters $d_6$ <sup>1)</sup>		DS 型 / Form DS												
大于 above	至 to	DS 型 中心孔 Centering	$d_1$	$d_2$ <sup>2)</sup>	$d_3$	$d_4$	$d_5$	$t_1$ +2	$t_2$ min.   max.	$t_3$ +1	$t_4$ ≈	$t_5$ ≈		
mm		mm												
16	21	DS 6	M6	5	6.4	9.6	10.5	16	20   22	5	2.8	0.4		
21	24	DS 8	M8	6.8	8.4	12.2	13.2	19	25   28	6	3.3	0.4		
24	30	DS 10	M10	8.5	10.5	14.9	16.3	22	30   34	7.5	3.8	0.6		
30	38	DS 12	M12	10.2	13	18.1	19.8	28	37   42	9.5	4.4	0.7		
38	50	DS 16	M16	14	17	23	25.3	36	45   50	12	5.2	1.0		
50	85	DS 20	M20	17.5	21	28.4	31.3	42	53   59	15	6.4	1.3		
85	130	DS 24	M24	21	25	34.2	38	50	63   68	18	8	1.6		
130 <sup>3)</sup>	225 <sup>3)</sup>	DS 30	M 30 <sup>3)</sup>	26.5	31	44	48	60	77   83	17	11	1.9		
225 <sup>3)</sup>	320 <sup>3)</sup>	DS 36	M36 <sup>3)</sup>	32	37	55	60	74	93   99	22	15	2.3		
320 <sup>3)</sup>	500 <sup>3)</sup>	DS 42	M42 <sup>3)</sup>	37.5	43	65	71	84	105   111	26	19	2.7		
500 <sup>3)</sup>	710 <sup>3)</sup>	DS 48	M48 <sup>3)</sup>	43	49	76	83	94	115   121	30	23	3.2		

1) 工件加工后最终尺寸

1) Diameter of the finished work piece

2) 螺纹攻丝钻头直径按照DIN336第1部分确定

2) Drill diameters for tapping-size holes acc.to DIN 336Pt.1

3) 不是按照DIN332确定的尺寸

3) Dimensions not acc.to DIN332

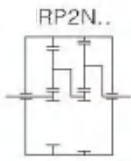
## 6. 实际传动比 Actual Ratios

类型 JRP2N..和JRP2S..

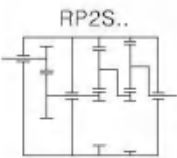
Types JRP2N..and JRP2S..



RP2N.. 规格 Size	实际传动比 / Actual ratios $i$				
	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	40.302
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

 $i_N=25...40$ 

RP2S.. 规格 Size	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	95.963	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	120.59
17	42.318	47.833	55.417	61.438	71.178	78.788	91.278	96.594	111.91	120.59
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	84.841	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

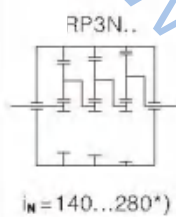
 $i_N=45...125$



类型 RP3N..和 RP3S..

Types RP3N..and RP3S..

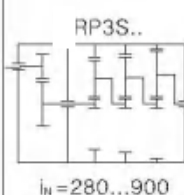
RP3N.. 规格 Size	实际传动比 / Actual ratios							
	140	160	180	200	225	250	280	
9	146.81	165.95	192.25	210.43	233.57	264.01	305.86	
10	146.81	165.95	192.25	210.43	233.57	264.01	305.86	
11	147.12	165.34	189.99	207.96	230.82	260.90	302.26	
12	142.04	159.64	183.44	200.79	222.86	251.90	291.84	
13	142.94	161.57	187.19	204.88	227.41	257.04	297.79	
14	142.94	161.57	187.19	204.88	227.41	257.04	297.79	
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	297.79	
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	152.79	171.71	197.32	215.97	239.71	270.95	313.91	
25/26	152.79	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	



\*)传动比90...140, 敬请垂询

\*)Ratios 90...140 on request

JRP3S.. 规格 Size	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	368.86	385.82	443.35	490.62	563.78	621.11	713.72	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	479.82	544.32	630.61	662.65	767.70	822.54	952.94
21/22	302.43	341.84	396.04	414.26	479.82	544.32	630.61	662.65	767.70	822.54	952.94
23/24	295.28	331.86	381.34	426.24	489.80	546.62	628.12	670.15	770.08	829.80	961.35
25/26	295.28	331.86	381.34	416.52	489.80	546.62	628.12	670.15	770.08	829.80	961.35
27/28	296.01	334.59	387.63	426.24	482.56	545.35	631.81	662.65	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





类型 IRP2L.., IRP2K. 和 RP3K.

Types , RP2L.., RP2K. and RP3K..



RP2L.. 规格 Size	实际传动比 / Actual ratios											
	31.5	35.5	40	45	50	56	63	71	80	90	100	
9	32.5353	35.6114	39.5264	43.8820	50.4204	55.7278	60.4521	69.6115	79.0528	86.2394	98.2171	
10	32.5353	35.6114	39.5264	43.8820	50.4204	55.7278	60.4521	69.6115	79.0528	86.2394	98.2171	
11	32.8413	35.8344	39.6083	43.4177	50.5248	55.8432	60.5773	69.7557	79.9667	86.4180	98.4205	
12	31.7089	34.5987	38.2424	41.9206	48.7826	53.9176	58.4884	67.3503	77.2092	83.4380	95.0266	
13	31.6775	34.6723	38.4842	42.1856	49.0910	54.2585	62.3263	67.7761	77.6973	83.9656	95.6275	
14	31.6775	34.6723	38.4842	42.1856	49.0910	54.2585	62.3263	67.7761	77.6973	83.9656	95.6275	
16	31.4135	34.3835	38.1635	41.8340	48.6818	53.8063	61.8069	67.2113	77.0498	83.2658	94.8305	
17	31.4135	34.3835	38.1635	41.8340	48.6818	53.8063	61.8069	67.2113	77.0498	83.2658	94.8305	
18	31.4286	34.3999	38.1819	43.1490	49.0910	54.8664	62.3263	67.7761	77.6973	83.9656	95.6275	
19/20	33.5237	34.6933	40.7272	46.0254	52.3636	58.5240	66.4812	72.2943	82.8769	89.5630	102.0023	
21/22	33.5237	34.6933	40.7272	46.0254	52.3636	58.5240	66.4812	72.2943	82.8769	89.5630	102.0023	
23/24	33.8391	34.9231	40.8116	46.1208	52.4720	58.6452	66.6189	72.4441	83.0486	89.7486	102.2136	
25/26	33.8391	34.9231	40.8116	46.1208	52.1365	58.6452	66.6189	72.4441	83.0486	89.7486	102.2136	
27/28	33.5237	34.6933	40.7272	46.0254	52.0288	58.5240	66.4812	72.2943	82.8769	89.5630	102.0023	
29/30	33.5237	34.6933	40.7272	46.0254	52.0288	58.5240	66.4812	72.2943	82.8769	89.5630	102.0023	

RP2K. 规格 Size	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	312.60	341.01	388.38	436.60	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	107.97	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	141.11	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	195.22	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	195.22	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

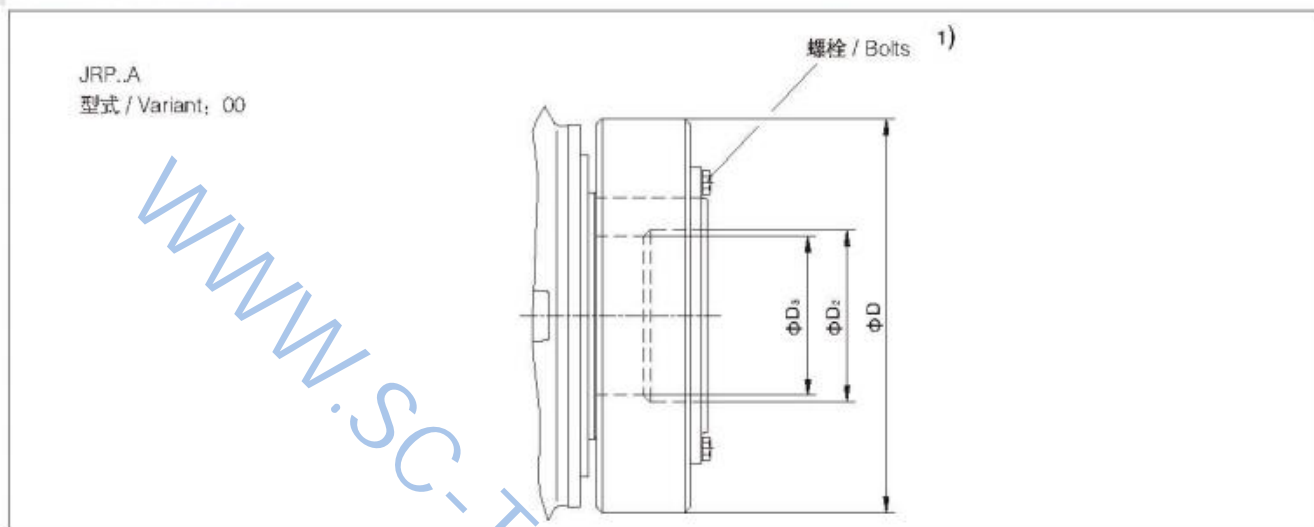
RP3K. 规格 Size	实际传动比 / Actual ratios																	
	560	630	710	800	900	1000	1120	1250	1400	1600	1800	2000	2240	2500	2800	3150	3550	4000
9	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3105.0	3597.2	4167.5
10	566.22	640.02	700.53	777.54	878.88	982.19	1137.3	1247.3	1353.1	1558.1	1769.4	1930.3	2198.4	2471.3	2724.8	3104.9	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	2774.8	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	673.37	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	987.8	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9
29/30	580.56	656.22	718.27	797.23	901.13	987.8	1149.5	1270.5	1459.4	1587.0	1819.3	1966.1	2239.2	2517.2	2775.4	3162.6	3664.0	4244.9



## 7. 输出轴的类型 Variants of Output Shafts

带锁紧盘的空心输出轴

Hollow Shaft for Shrink Disk



尺寸和重量 / Dimensions and weights

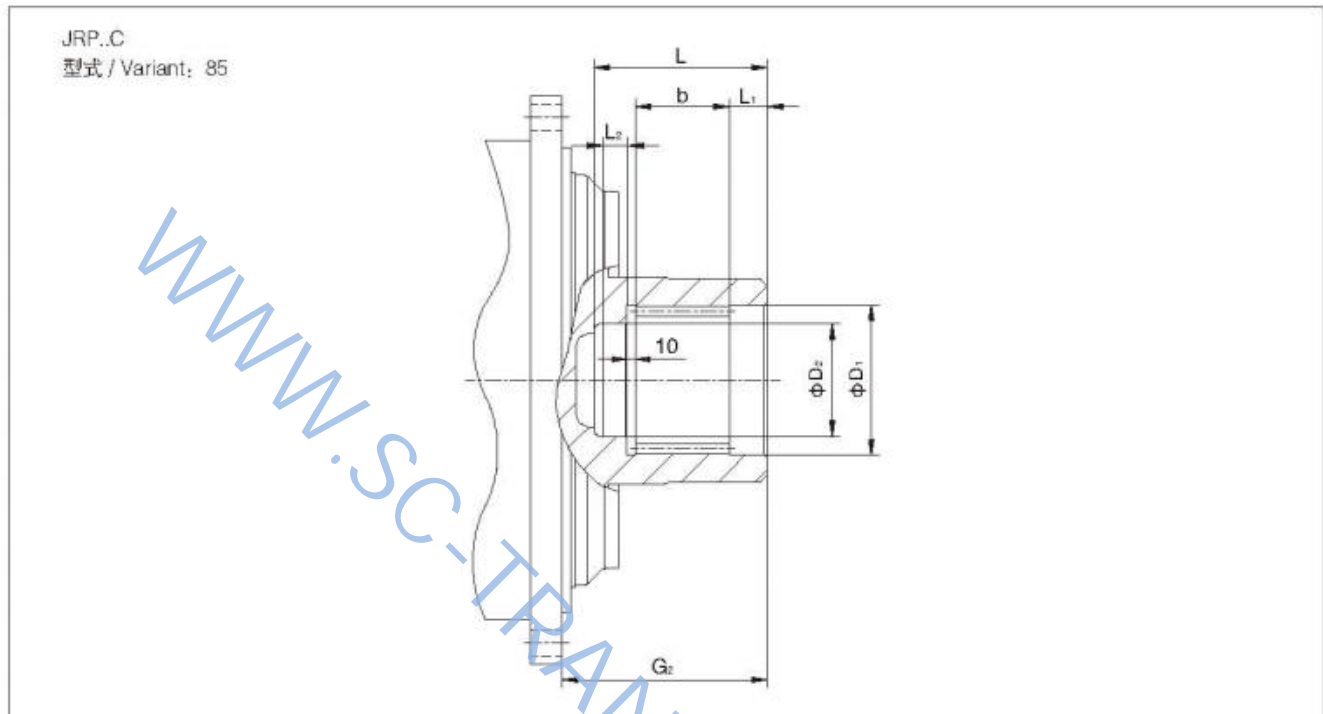
行星齿轮箱 Planetary gear unit	额定输出扭矩 Nominal Output Torques	空心输出轴孔径 Hollow shaft bore diameter		锁紧盘 / Shrink disk			
		mm		规格 Size mm	D mm	螺栓 Bolts 1)	重量 Weight kg
		$D_2$	$D_3$				
9	22000	120H7	115H7	155	263	M14	15.2
10	31000	130H7	125H7	165	290	M16	21.5
11	42000	140H7	135H7	185	320	M16	32.7
12	60000	160H7	155H7	220	370	M20	53
13	83000	180H7	175H7	240	405	M20	66
14	117000	210H7	205H7	280	460	M20	103
16	160000	230H7	225H7	300	485	M24	120
17	202000	250H7	245H7	320	520	M24	138
18	244000	260H7	255H7	340	570	M24	189
19	295000	280H7	275H7	360	590	M24	207
20	354000	300H7	295H7	380	640	M27	244
21	392000	310H7	305H7	390	650	M27	249
22	450000	330H7	325H7	420	670	M27	285
23	513000	350H7	345H7	440	720	M27	357
24	592000	360H7	355H7	460	760	M27	402
25	684000	380H7	375H7	480	800	M30	492
26	763000	400H7	395H7	500	835	M30	537
27	852000	430H7	425H7	530	865	M30	636
28	950000	450H7	445H7	560	920	M30	725
29	1060000	460H7	450H7	560	920	M30	725
30	1200000	480H7	470H7	590	960	M30	835
31	1330000	480H7	470H7	590	960	M30	835
32	1500000	510H7	500H7	620	970	M30	903
33	1680000	530H7	520H7	660	1040	M33	1073
34	1920000	570H7	560H7	700	1100	M33	1196
35	2240000	600H7	590H7	750	1150	M33	1346
36	2600000	640H7	630H7	800	1230	M33	1646

1) 安装和拆卸见操作说明书

1) For assembly and disassembly, see operating instructions

## 带渐开线花键的空心输出轴

## Hollow Shaft with Involute Spline

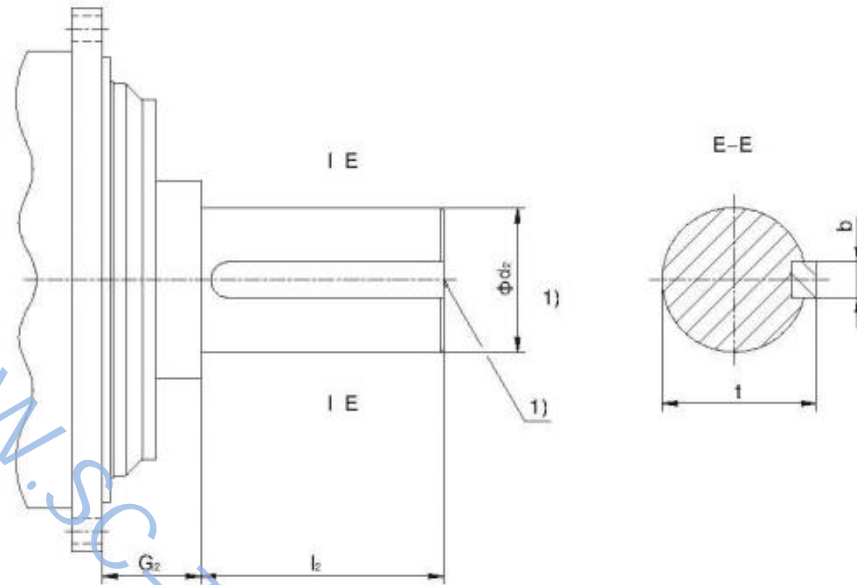


尺寸 / Dimensions									
行星齿轮箱 Planetary gear unit	额定输出扭矩 Nominal Output Torques	渐开线花键按照标准 DIN 5480 Involute splines acc to DIN5480	键长 Facewidth	孔1尺寸 Centre hole dimension		孔2尺寸 Centre hole dimension		总长 Overall dimension	
规格 Size	$T_{2H}$ N.m		b mm	$D_1$ mm	$L_1$ mm	$D_2$ mm	$L_2$ mm	L mm	$G_2$ mm
9	22000	N120x5x30x22x9H	70	122H7	40	107H7	20	150	165
10	31000	N130x5x30x24x9H	80	132H7	40	117H7	20	160	174
11	42000	N140x5x30x26x9H	90	142H7	45	125H7	25	180	204
12	60000	N160x5x30x30x9H	100	162H7	45	145H7	25	190	223
13	83000	N180x5x30x34x9H	110	182H7	45	165H7	25	200	237
14	117000	N210x5x30x40x9H	125	212H7	45	195H7	25	215	264
16	160000	N240x8x30x28x9H	140	242H7	50	220H7	25	235	285
17	202000	N250x8x30x30x9H	150	252H7	50	230H7	30	250	290
18	244000	N260x8x30x31x9H	160	262H7	50	240H7	30	260	303
19	295000	N280x8x30x34x9H	170	282H7	50	260H7	30	270	327.5
20	354000	N300x8x30x36x9H	180	302H7	50	282H7	30	280	327.5
21	392000	N310x8x30x37x9H	190	312H7	60	290H7	40	310	354
22	450000	N330x8x30x40x9H	200	332H7	60	310H7	40	320	354
23	513000	N340x8x30x41x9H	200	342H7	60	320H7	40	320	348
24	592000	N360x8x30x44x9H	220	362H7	60	340H7	40	340	368
25	684000	N380x8x30x46x9H	230	382H7	60	360H7	40	350	372
26	763000	N400x8x30x48x9H	240	402H7	60	380H7	40	360	382
27	852000	N440x8x30x54x9H	250	442H7	60	420H7	40	370	423
28	950000	N450x8x30x55x9H	260	452H7	65	430H7	40	385	428
29	1060000	N460x8x30x56x9H	270	462H7	65	440H7	45	400	433
30	1200000	N480x8x30x58x9H	285	482H7	65	460H7	45	415	448

带平键的实心输出轴

Solid Shaft with Parallel key

RP..B  
型式 / Variant: 00



尺寸 / Dimensions

行星齿轮箱 Planetary gear unit 规格 Size	额定输出扭矩 Nominal Output Torques $T_{2N}$ N.m	实心输出轴(mm) Solid shaft (mm)				
		$d_2$	$l_2$	$G_2$	$b$	$t$
9	22000	120 n6	210	95	32	127
10	31000	130 n6	210	95	32	137
11	42000	150 n6	240	109	36	158
12	60000	160 n6	270	106	40	169
13	83000	180 n6	310	118	45	190
14	117000	210 n6	350	139	50	221
16	160000	230 n6	350	142	50	241
17	202000	250 n6	400	139	56	262
18	244000	260 n6	400	134	56	272
19	295000	280 n6	450	148.5	56	292
20	354000	300 n6	500	148.5	63	314
21	392000	310 n6	500	158	70	324
22	450000	330 n6	500	158	70	344
23	513000	350 n6	550	175	80	365
24	592000	360 n6	590	175	80	375
25	684000	380 n6	590	182	80	395
26	763000	400 n6	650	182	90	417
27	852000	430 n6	690	196.5	90	447
28	950000	450 n6	750	196.5	100	469
29	1060000	460 n6	750	209	100	479
30	1200000	480 n6	790	209	100	499
31	1330000	500 n6	790	232	100	519
32	1500000	510 n6	850	232		
33	1680000	530 n6	900	251		
34	1920000	570 n6	950	251		
35	2240000	600 n6	1000	276		
36	2600000	640 n6	1000	276		

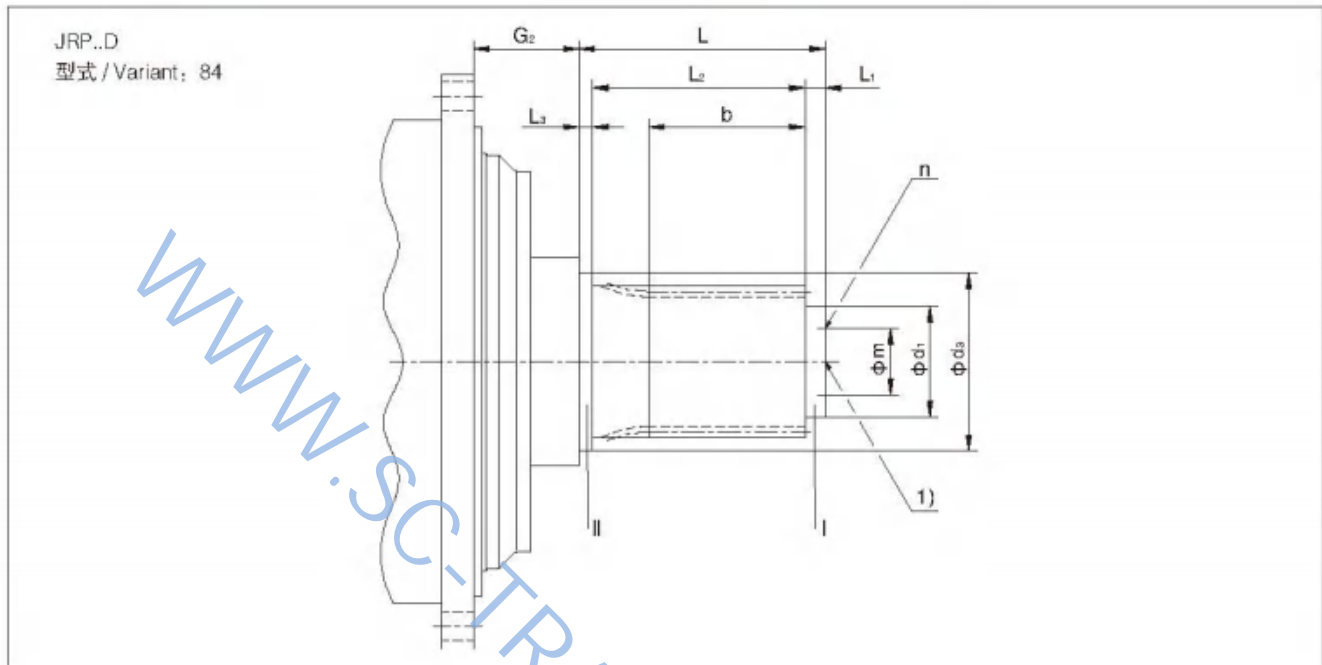
敬请垂询  
On request

1)带中心孔的轴伸见第36页

1)For shaft end with centre hole , see page 36

## 带渐开线花键的实心输出轴

## Solid Shaft with Involute Spline



尺寸 / Dimensions

行星齿轮箱 Planetary gear unit	额定输出扭矩 Nominal Output Torques	渐开线花键按照标准 DIN 5480 Involute splines acc to DIN5480	有效键长 Facewidth		轴颈 I 尺寸 Shaft I dimension		轴颈 II 尺寸 Shaft II dimension			L	m	n
			b mm	G <sub>2</sub> mm	d <sub>1</sub> mm	L <sub>1</sub> mm	d <sub>2</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm			
9	22000	W130x5x30x24x8m	70	95	110k6	20	132k6	20	80	120	80	3xM16x24
10	31000	W140x5x30x26x8m	80	95	120k6	20	142k6	20	90	130	90	3xM16x24
11	42000	W160x5x30x30x8m	90	109	140k6	25	162k6	25	100	150	110	3xM16x24
12	60000	W180x5x30x34x8m	100	106	90k6	25	162k6	25	110	160	130	3xM16x24
13	83000	W200x5x30x38x8m	110	118	100k6	30	202k6	25	120	175	140	3xM16x24
14	117000	W220x5x30x42x8m	125	139	120k6	30	222k6	30	135	195	160	3xM16x24
16	160000	W250x8x30x30x8m	140	142	140k6	35	252k6	30	155	220	185	3xM20x30
17	202000	W260x8x30x31x8m	150	139	155k6	40	262k6	35	165	240	200	3xM20x30
18	244000	W280x8x30x34x8m	160	134	170k6	40	282k6	35	175	250	215	3xM20x30
19	295000	W300x8x30x36x8m	170	148.5	180k6	40	302k6	35	185	260	225	3xM20x30
20	354000	W310x8x30x37x8m	180	148.5	190k6	40	312k6	35	195	270	235	6xM20x30
21	392000	W320x8x30x38x8m	190	158	200k6	40	322k6	35	205	280	250	6xM20x30
22	450000	W340x8x30x41x8m	200	158	210k6	40	342k6	35	215	290	265	6xM20x30
23	513000	W360x8x30x44x8m	200	175	230k6	40	362k6	35	215	290	275	6xM20x30
24	592000	W380x8x30x46x8m	220	175	245k6	40	382k6	35	235	310	290	6xM20x30
25	684000	W400x8x30x48x8m	230	182	260k6	40	402k6	35	245	320	310	6xM24x36
26	763000	W420x8x30x51x8m	240	182	280k6	40	422k6	35	255	330	330	6xM24x36
27	852000	W440x8x30x54x8m	250	196.5	310k6	40	442k6	35	265	340	370	6xM24x36
28	950000	W450x8x30x55x8m	260	196.5	330k6	45	452k6	40	275	360	380	6xM24x36
29	1060000	W460x8x30x56x8m	270	209	340k6	45	462k6	40	285	370	390	6xM24x36
30	1200000	W480x8x30x58x8m	285	209	360k6	45	482k6	40	300	385	410	6xM24x36

1)带中心孔的轴伸见第36页

1)For shaft end with centre hole, see page 36





## 8. 附件 Add-on Pieces

附件表

Table of Add-on Pieces

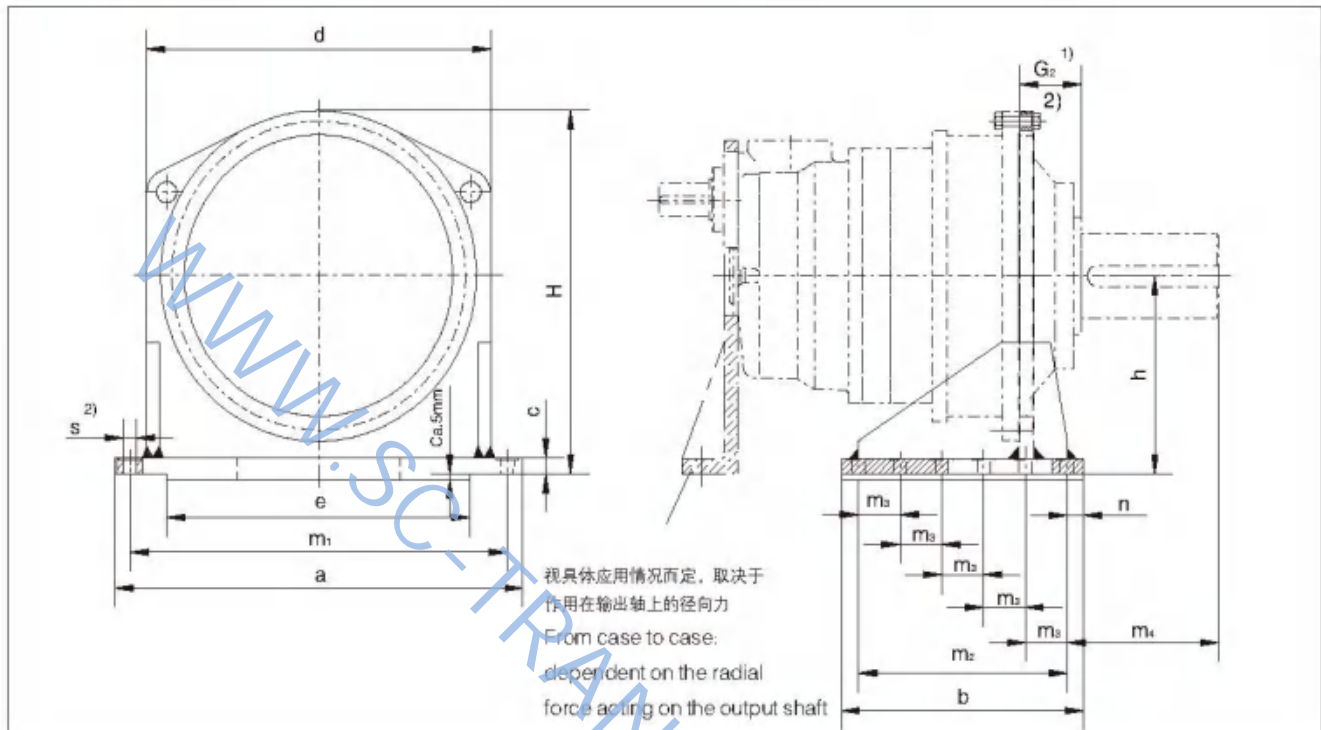
标记 Identification	附件 Add-on Piece		附图 Representation
00	无附件 / Without add-on Piece		
01	齿轮箱基座 Gear housing base	见第45页 see page 45	
70 1)	电机安装法兰 (输入端) Motor bell housing (input)	见第51-56页 see page 51-56	
71 1)	电机支架 (电动机, 联轴器) Motor bracket (motor, coupling)	见第49页 see page 49	
72	电机支架 Motor bracket	见第49页 see page 49	
73 1)	电机浮动底座 (电动机, 联轴器, 齿轮箱) Motor swing-base (motor, coupling, gear unit)	见第49页 see page 49	
74 1)	安装法兰 (输出端) Bell housing (output)	敬请垂询 On request	
75	(单侧)扭力臂 Torque reaction arm (on one side)	见第46页 see page 46	
76	(双侧)扭力臂 Torque reaction arm (on both side)	见第47页 see page 47	
77	扭力轴支撑 Torsion shaft support	见第48页 see page 48	
78	逆止器 (JRP2K../JRP3K..) Backstop (JRP2K../JRP3K..)	敬请垂询 On request	
79	特殊设计 Special design		

1)不能应用钢性联轴器

1)Not for rigid couplings

附件：齿轮箱基座

Add-on Piece: Gear Housing Base



尺寸 / Dimensions															
行星齿轮箱 Planetary gear unit	a	b	c	d	e	h	H	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	m <sub>4</sub>	n	地脚螺栓 Foundation bolt		重量 Weight
规格 Size	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	s <sup>2)</sup> mm	数量 No.	约/ca. kg
9	580	330	20	450	380	260	480	520	260	100	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	24	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	1320	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	1420	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	1550	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	敬请垂询 / On request														

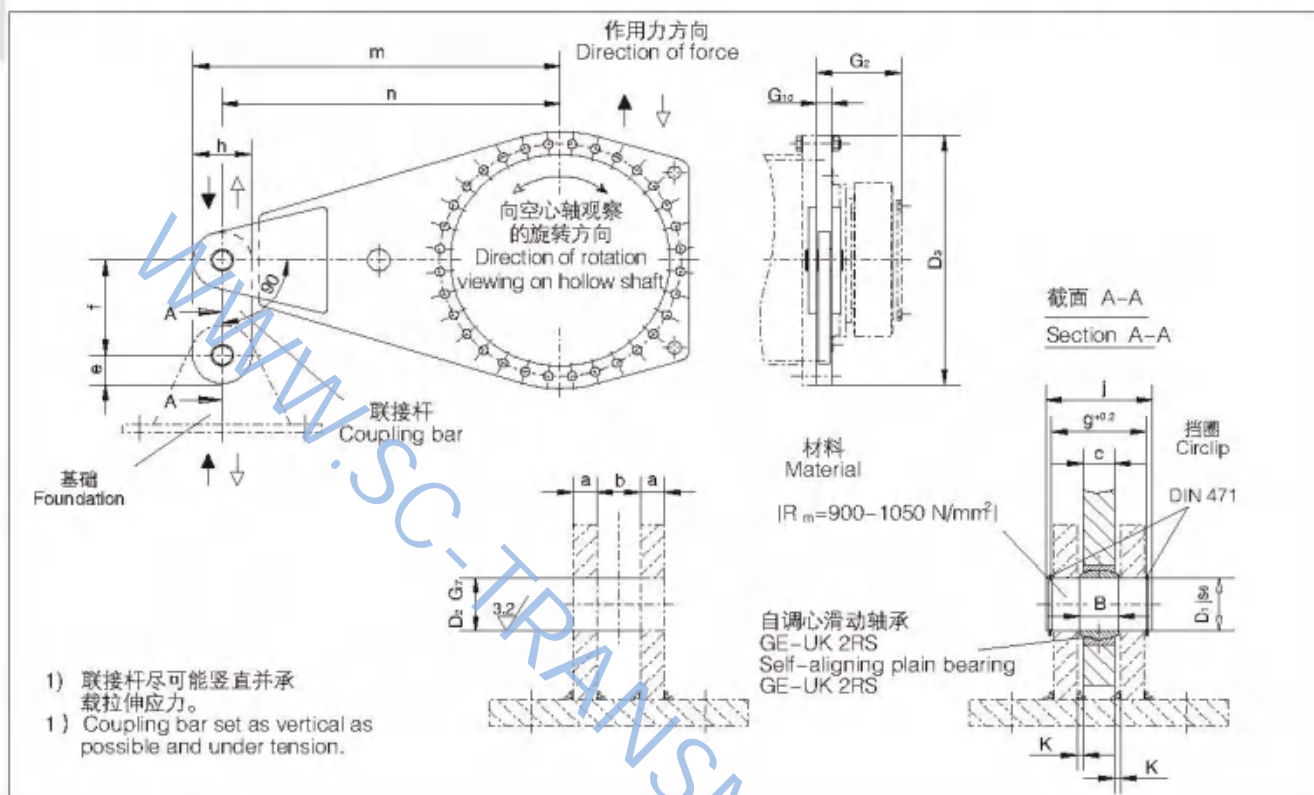
1) 输出轴尺寸见第42页。  
2) 见第48页

1) For output shaft dimensions, see page 42  
2) See page 48



附件：带联接杆的单侧扭力臂

Add-on Piece: Torque Arms on One Sides for Coupling Bar



尺寸 / Dimensions																				
行星齿轮箱 Planetary gear unit 规格 Size	额定输出扭矩 Nominal Output Torques T <sub>2N</sub> N.m	D <sub>1</sub> js6	D <sub>2</sub> G7	D <sub>3</sub>	G <sub>2</sub>	G <sub>10</sub>	a min.	b	B 2)	c	e	f	g +0.2	h	j	间隙 Clearance K	m	n	自调心滑动轴承 Self-aligning plain bearing GE-UK-2RS	重量 Weight 约/ca. kg
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	115	280	120	210	135	7.5	1315	1210	70	365	
19	295000	80	1005	327.5	60	30	60	55	45	115	320	125	210	145	7.5	1405	1300	80	423	
20	354000	80	1005	327.5	60	30	60	55	45	115	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																			敬请垂询 / On request	

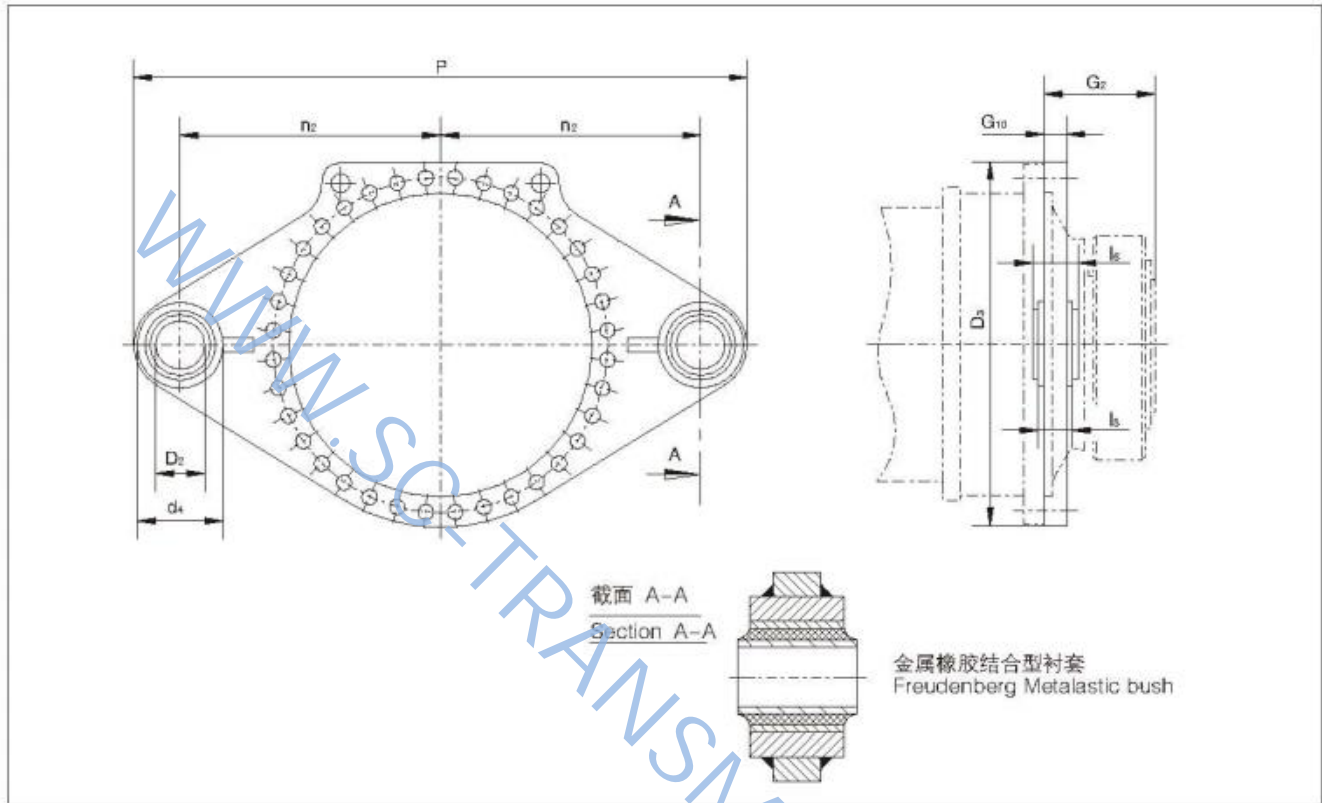
2) 公称尺寸 B=22-35 → 公差-0.12  
公称尺寸 B=44-55 → 公差-0.15  
公称尺寸 B=60-70 → 公差-0.20

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



附件：带橡胶衬套的双侧扭力臂

Add-on Piece: Torque Arms on Two Sides with Rubber Bushes



尺寸 / Dimensions												
行星 齿轮箱 Planetary gear unit 规格 Size	额定输出 扭矩 Nominal Output Torques T <sub>2N</sub> N.m	D <sub>2</sub> 1) φH9	D <sub>3</sub>	d <sub>4</sub>	G <sub>2</sub>	G <sub>10</sub>	b	l	n <sub>2</sub>	P	重量 Weight 约/ca. kg	
					mm							
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	

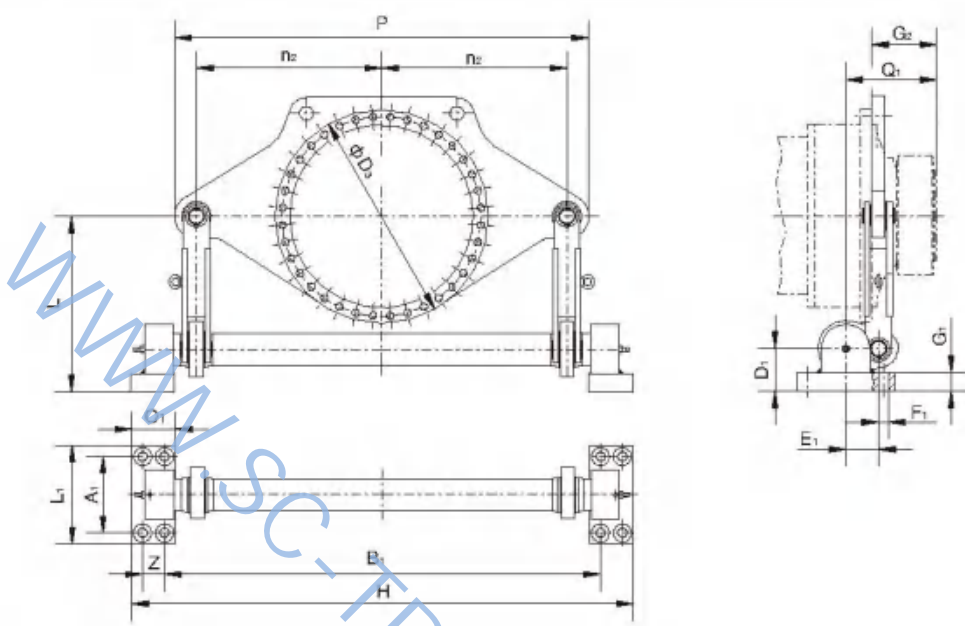
1) 销轴: φh8

1) Pin: φh8



附件：扭力轴支撑

Add-on Piece: Torsion Shaft Support



尺寸 / Dimensions

行星 齿轮箱 Planetary gear unit 规格 Size	额定输出 扭矩 Nominal Output Torques $T_{2N}$ Nm	A <sub>1</sub>	B <sub>1</sub>	D <sub>3</sub>	D <sub>1</sub>	E <sub>1</sub>	F <sub>1</sub>	数量 2) No.	G <sub>1</sub>	G <sub>2</sub>	H	L	L <sub>1</sub>	n <sub>2</sub>	Q <sub>1</sub>	P	Q <sub>2</sub>	Z	重量 Weight 约/ca. kg
9	22000	250	1320	610	120	105	33	8	48.5	165	1525	560	330	550	140	1230	247.5	65	325
10	31000	250	1320	610	120	105	33	8	48.5	174	1525	560	330	550	140	1230	256.5	65	325
11	42000	250	1320	610	120	105	33	8	48.5	204	1525	560	330	550	140	1230	286.5	65	325
12	60000	250	1320	610	120	105	33	8	48.5	224	1525	560	330	550	140	1230	306.5	65	325
13	83000	280	1547	775	155	145	39	8	68.5	241	1780	620	380	650	158	1450	358.5	75	620
14	117000	280	1547	775	155	145	39	8	68.5	278	1780	620	380	650	158	1450	395.5	75	620
16	160000	280	1547	775	155	145	39	8	68.5	285	1780	620	380	650	158	1450	402.5	75	620
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	1200
20	354000	350	2000	985	195	175	45	8	83.5	328	2300	860	450	850	200	1900	470.5	100	1200
21	392000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1500
22	450000	400	2254	1120	210	190	45	8	88.5	354	2591	900	530	950	225	2110	506.5	113	1500
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	2650
26	763000	500	2816	1350	275	245	52	8	118.5	407	3236	1200	650	1150	280	2600	614.5	140	2650
27	852000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3250
28	950000	530	2887	1490	300	255	52	8	128.5	453	3327	1250	700	1250	290	2820	670.5	150	3250
29	1060000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	3900
30	1200000	560	3200	1565	300	280	62	8	128.5	483	3673	1350	750	1360	315	3080	718	158	3900
31	1330000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5050
32	1500000	590	3408	1695	340	300	70	8	148.5	538	3906	1400	790	1450	330	3260	788	168	5050
33	1680000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	6800
34	1920000	620	3588	1785	375	320	70	8	158.5	573	4116	1500	840	1550	350	3520	840.5	178	6800
35+36																			

敬请垂询 / On request

- 1) 标准尺寸，最高可至2000mm。  
2) 螺栓强度为6.8级，按照标准DIN898。

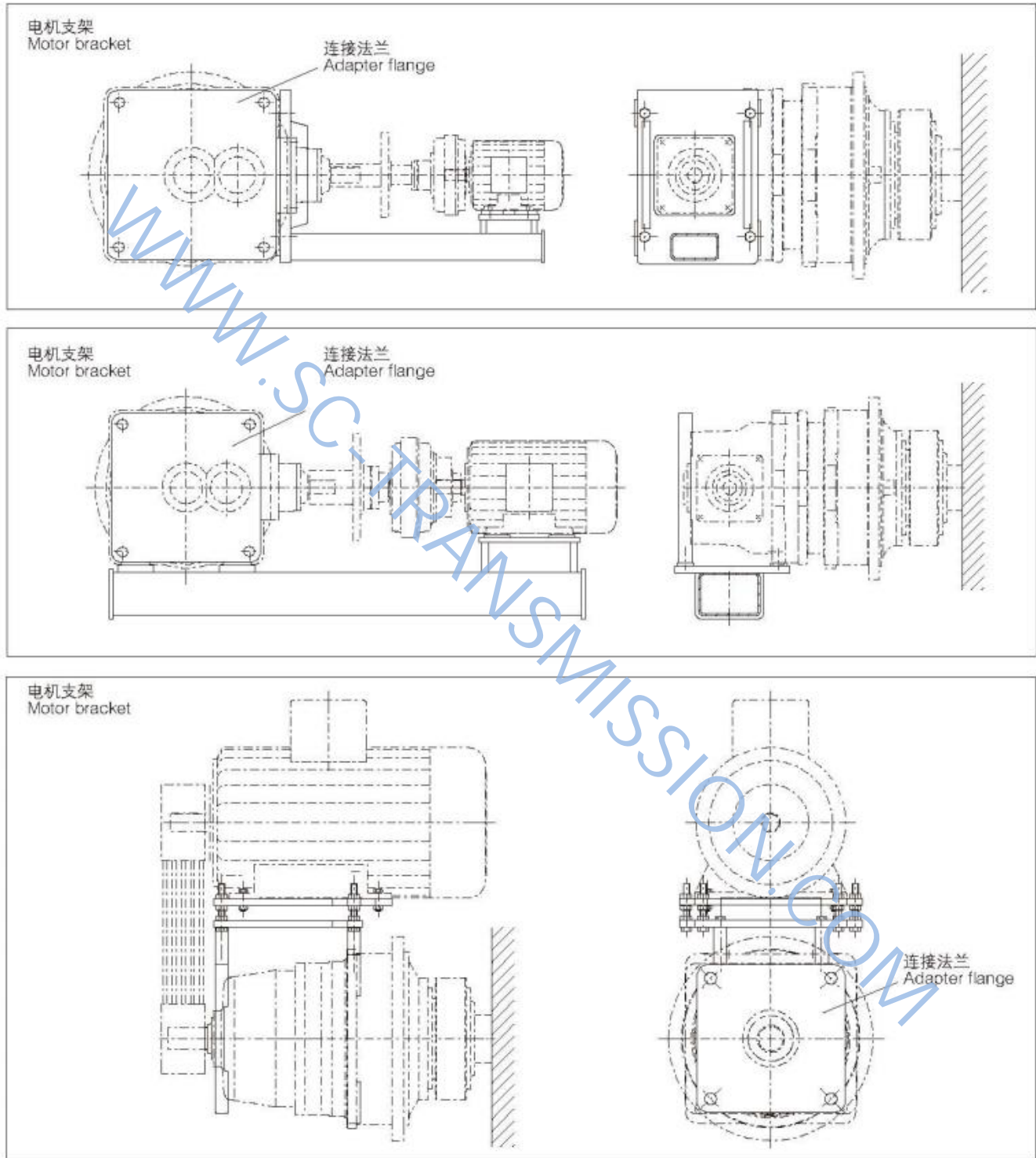
- 1) Standard dimension, overall height modifiable up to 2000 mm.  
2) Use bolts of property class 6.8 acc. to DIN 898.

在标准设计型式，即DSD型中采用无需维护保养的、在轴承中内置密封装置的自调心滑动轴承。  
在特殊要求及特殊环境条件下，自调心滑动轴承可以通过附加的密封装置加以保护，在这种情况下应采用设计型式DDA。

With the standard design, type DSD, maintenance-free self-aligning plain bearings with integrated seal are used. Where there are special requirements or special ambient conditions, the self-aligning plain bearings can be protected with an additional seal. In this case, the DDA design is required.

## 附件：电机支架

## Add-on Piece: Motor Bracket



在不能采用电机安装法兰的场合，我们使用一个连接法兰与电机支架固定。

标准箱体及其中间法兰是专门为了连接之用而准备的，并且是根据订单要求加工的。

支架连接型式及结构如上图所示。对于每一种不同类型和规格的齿轮箱，所允许使用的电机规格需与设计部门进行确认。

In cases where no motor bell housings are provided we use an adapter flange to attach motor brackets.

The standard housings and intermediate flanges are specially prepared for attachment and are machined to order specifications.

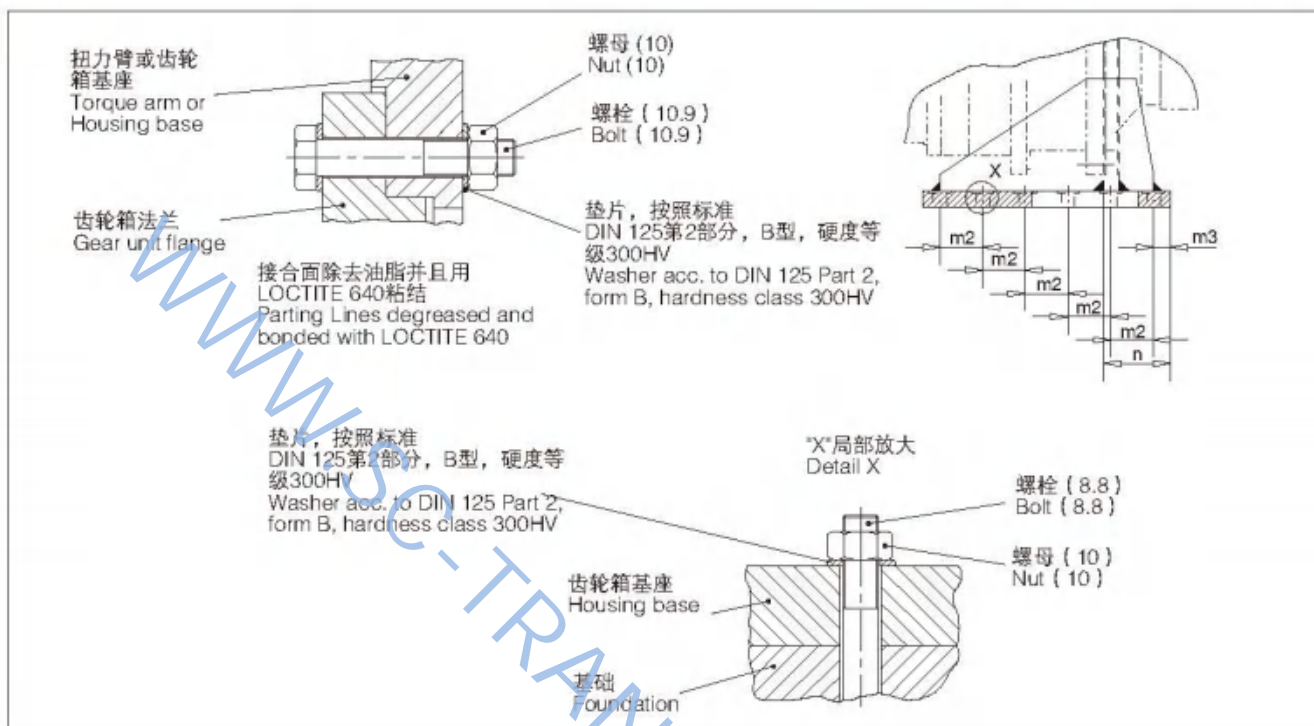
Examples of the type and design of bracket attachment are shown in the above drawings. The permissible motor size for each gear unit size and design is to be agreed upon from case to case with the design department.





法兰连接和地脚安装的紧固力矩

Tightening Torques for Flange Connections and Foot – mounted Design



尺寸 / Dimensions

齿轮箱规格 Gear unit size	法兰连接 Flange attachment		地脚连接 <sup>1)</sup> Base attachment	
	螺纹强度等级 (10.9) Thread Strength class(10.9)	紧固力矩 <sup>2)</sup> Tightening torque Nm	螺纹强度等级 (8.8) Thread Strength class(8.8)	紧固力矩 <sup>2)</sup> Tightening torque Nm
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	13850	M64	14300
33/34	M56	13850	M64	14300
35/36	M56	13850	M72	20800

1) 用户需检查联接螺栓以确保其与基础上的联接孔相匹配。

1) The bolts must be checked by the user to ensure that they are suitable for the foundation design.

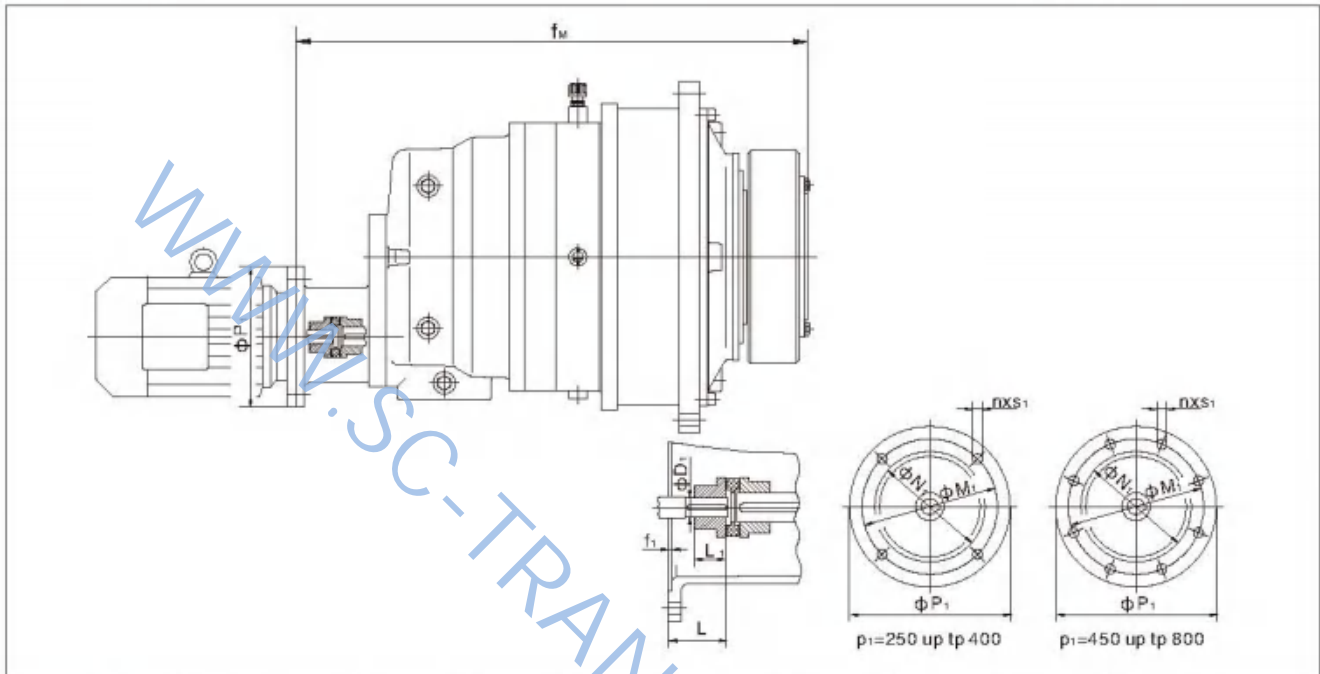
2) 紧固力矩是指当螺纹摩擦系数为0.14, 达到螺栓90%屈服极限时的力矩值。

2) Tightening torques relate to friction values 0.14 in the thread and 90% utilization of yield point.

## 9. 输入法兰的尺寸 Input Flange Dimension

类型: RP2S..

Type: RP2S..



RP2S..	电机 Motor (Y)	法兰 Flange (F)	$D_1$	$f_1$	$f_w$	$L$	$L_1$	$M_1$	$n$	$N_1$	$P_1$	$S_1$
9	160		42	6	832	110	75	300	4	250h7	350	M16
	180		48	6	832	110	75	300	4	250h7	350	M16
10	160		42	6	861	110	75	300	4	250h7	350	M16
	180		48	6	861	110	75	300	4	250h7	350	M16
11	160		42	6	1010	110	75	300	4	250h7	350	M16
	180		48	6	1010	110	75	300	4	250h7	350	M16
	200		55	7	1010	110	75	350	4	300h7	400	M16
12	160		42	6	1044	110	75	300	4	250h7	350	M16
	180		48	6	1044	110	75	300	4	250h7	350	M16
	200		55	7	1044	110	75	350	4	300h7	400	M16
13	225		60	7	1247	140	90	400	8	350h7	450	M16
	250		65	8	1247	140	90	500	8	450h7	550	M16
14	225		60	7	1307	140	90	400	8	350h7	450	M16
	250		65	8	1307	140	90	500	8	450h7	550	M16
16	250		65	7	1452	140	100	500	8	450h7	550	M16
	280		75	8	1452	140	100	500	8	450h7	550	M16
17	250		65	7	1487	140	100	500	8	450h7	550	M16
	280		75	8	1487	140	100	500	8	450h7	550	M16
18	315		80	11	1680	140	110	600	8	550h7	660	M20
19-20	315		80	11	1728	140	110	600	8	550h7	660	M20

注:(1)“\*”所选直联电机机座号所对应的功率应满足传动能力表;

“\*\*”表格中所示的法兰为标准型号的法兰,如有异同请另咨询。

(2)侧面扭力臂组合,请咨询。

Note: (1) “\*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

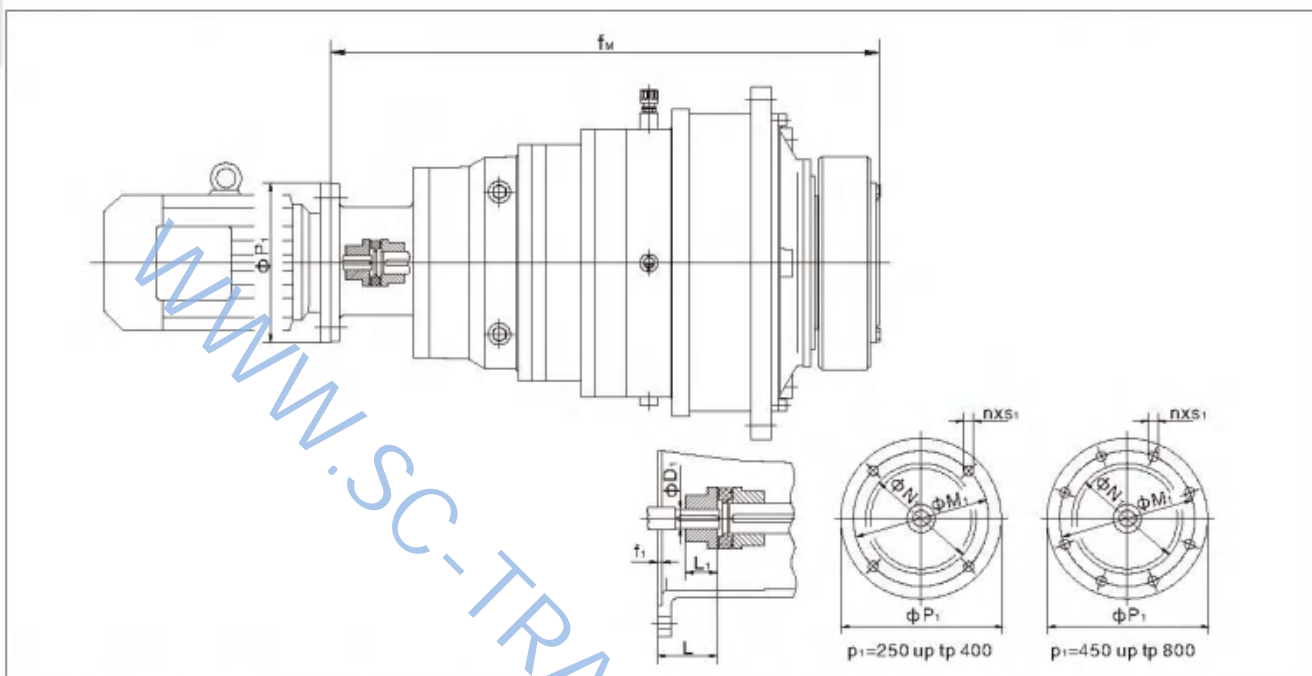
“\*\*” the flanges listed in the table are standard. Consult us if any deviation exists.

(2) For combinations with torque arm on one side, please consult us.



类型: RP3N..

Type: RP3N..



RP3N..	电机 Motor (Y)	法兰 Flange (F)	D <sub>1</sub>	f <sub>1</sub>	f <sub>M</sub>	L	L <sub>1</sub>	M <sub>1</sub>	n	N <sub>1</sub>	P <sub>1</sub>	S <sub>1</sub>
9	132	38	5	912	80	56	265	4	230h7	300	M12	
	160	42	6	960	110	80	300	4	250h7	350	M16	
	180	48	6	960	110	80	300	4	250h7	350	M16	
10	132	38	5	941	80	56	265	4	230h7	300	M12	
	160	42	6	989	110	80	300	4	250h7	350	M16	
	180	48	6	989	110	80	300	4	250h7	350	M16	
11	132	38	5	1002	80	56	265	4	230h7	300	M12	
	160	42	6	1050	110	80	300	4	250h7	350	M16	
	180	48	6	1050	110	80	300	4	250h7	350	M16	
12	132	38	5	1036	80	56	265	4	230h7	300	M12	
	160	42	6	1084	110	80	300	4	250h7	350	M16	
	180	48	6	1084	110	80	300	4	250h7	350	M16	
13	160	42	6	1159	110	80	300	4	250h7	350	M16	
	180	48	6	1159	110	80	300	4	250h7	350	M16	
	200	55	7	1159	110	80	350	4	300h7	400	M16	
14	160	42	6	1219	110	80	300	4	250h7	350	M16	
	180	48	6	1219	110	80	300	4	250h7	350	M16	
	200	55	7	1219	110	80	350	4	300h7	400	M16	
16	200	55	7	1400	110	90	350	4	300h7	400	M16	
	225	60	7	1430	140	90	400	8	350h7	450	M16	
17	200	55	7	1435	110	90	350	4	300h7	400	M16	
	225	60	7	1465	140	90	400	8	350h7	450	M16	
18	250	65	7	1636.5	140	100	500	8	450h7	550	M16	
	280	75	8	1636.5	140	100	500	8	450h7	550	M16	
19,20	250	65	7	1685	140	100	500	8	450h7	550	M16	
	280	75	8	1685	140	100	500	8	450h7	550	M16	

注:(1)“\*”所选直联电机机座号所对应的功率应满足传动能力表;

Note: (1) “\*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

“\*”表格中所示的法兰为标准型号的法兰, 如有异同请另咨询。

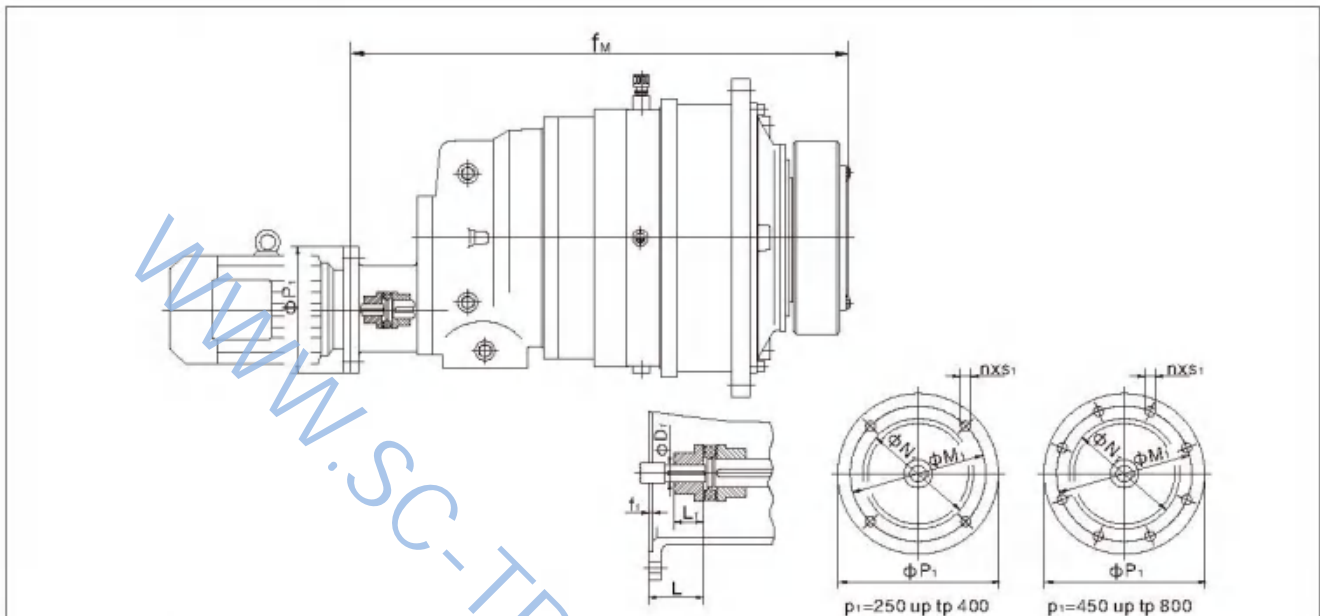
“\*” the flanges listed in the table are standard. Consult us if any deviation exists.

(2)侧面扭力臂组合, 请咨询。

(2) For combinations with torque arm on one side, please consult us.

类型: RP3S..

Type: RP3S..



RP3S..	电机 Motor (Y)	法兰 Flange (F)	D <sub>1</sub>	f <sub>1</sub>	f <sub>m</sub>	L	L <sub>1</sub>	M <sub>1</sub>	n	N <sub>1</sub>	P <sub>1</sub>	S <sub>1</sub>
9	100	28	5	865	60	45	215	4	180h7	250	M12	
	112	28	5	865	60	45	215	4	180h7	250	M12	
	132	38	5	896	80	70	265	4	230h7	300	M12	
	160	42	6	931	110	75	300	4	250h7	350	M16	
10	100	28	5	894	60	45	215	4	180h7	250	M12	
	112	28	5	894	60	45	215	4	180h7	250	M12	
	132	38	5	925	80	70	265	4	230h7	300	M12	
	160	42	6	957	110	75	300	4	250h7	350	M16	
11	112	28	5	955	60	45	215	4	180h7	250	M12	
	132	38	5	986	80	70	265	4	230h7	300	M12	
	160	42	6	1018	110	75	300	4	250h7	350	M16	
	180	48	6	1018	110	75	300	4	250h7	350	M16	
12	112	28	5	989	60	45	215	4	180h7	250	M12	
	132	38	5	1020	80	70	265	4	230h7	300	M12	
	160	42	6	1052	110	75	300	4	250h7	350	M16	
	180	48	6	1052	110	75	300	4	250h7	350	M16	
13	132	38	5	1095	80	70	265	4	230h7	300	M12	
	160	42	6	1127	110	75	300	4	250h7	350	M16	
	180	48	6	1127	110	75	300	4	250h7	350	M16	
14	132	38	5	1155	80	70	265	4	230h7	300	M12	
	160	42	6	1187	110	75	300	4	250h7	350	M16	
	180	48	6	1187	110	75	300	4	250h7	350	M16	
16	160	42	6	1365	110	75	300	4	250h7	350	M16	
	180	48	6	1365	110	75	300	4	250h7	350	M16	
	200	55	7	1365	110	75	350	4	300h7	400	M16	
17	160	42	6	1390	110	75	300	4	250h7	350	M16	
	180	48	6	1390	110	75	300	4	250h7	350	M16	
	200	55	7	1400	110	75	350	4	300h7	400	M16	
18	180	48	6	1558.5	110	90	300	4	250h7	350	M16	
	200	55	7	1570.5	110	90	350	4	300h7	400	M16	
	225	60	7	1608.5	110	90	400	8	350h7	450	M16	
	250	65	7	1608.5	110	90	500	8	450h7	550	M16	
19,20	180	48	6	1606	110	90	300	4	250h7	350	M16	
	200	55	7	1618	110	90	350	4	300h7	400	M16	
	225	60	7	1656	110	90	400	8	350h7	450	M16	
	250	65	7	1656	110	90	500	8	450h7	550	M16	

注:(1)“\*”所选直联电机机座号所对应的功率应满足传动能力表;

Note: (1) “\*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

“\*\*”表格中所示的法兰为标准型号的法兰, 如有异同请另咨询。

“\*\*” the flanges listed in the table are standard. Consult us if any deviation exists.

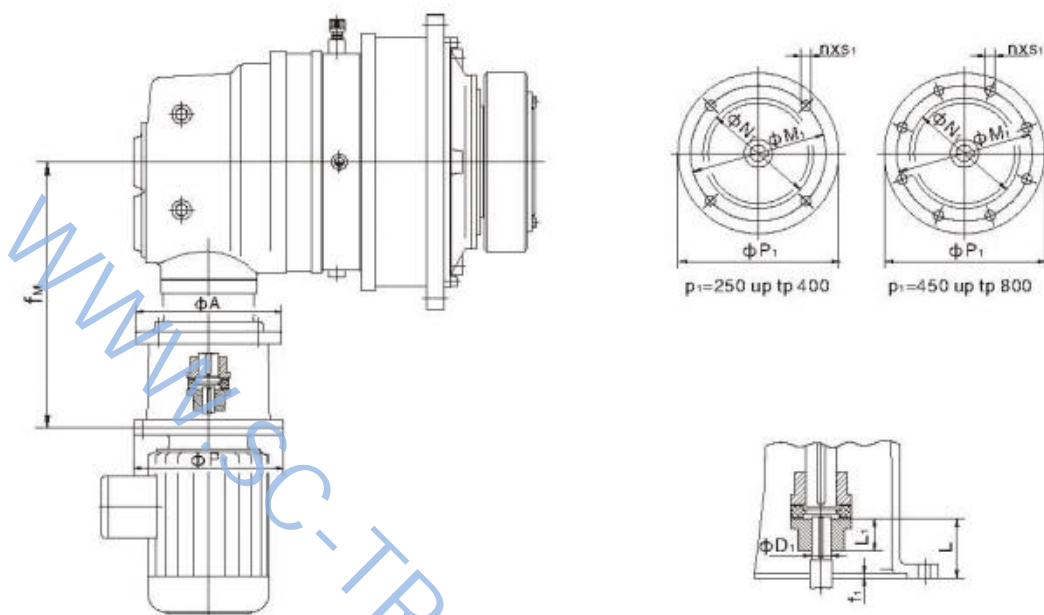
(2)侧面扭力臂组合, 请咨询。

(2) For combinations with torque arm on one side, please consult us.



类型: RP2K..

Type: RP2K..



RP2K..	电机 Motor (Y)	法兰 Flange (F)	A	$D_1$	$f_1$	$f_m$	L	$L_1$	$M_1$	$n$	$N_1$	$P_1$	$S_1$
9,10	132		250	38	5	486	80	70	265	4	230h7	300	M12
	160		250	42	6	528	110	75	300	4	250h7	350	M16
11,12	160		300	42	6	593	110	75	300	4	250h7	350	M16
	180		350	48	6	593	110	75	300	4	250h7	350	M16
	200		350	55	7	593	110	75	350	4	300h7	400	M16
13,14	160		440	42	6	663	110	75	300	4	250h7	350	M16
	180		440	48	6	663	110	75	300	4	250h7	350	M16
	200		440	55	7	663	110	75	350	4	300h7	400	M16
	225		440	60	7	695	140	80	400	8	350h7	450	M16
	250		440	65	8	707	140	85	500	8	450h7	550	M16
16,17	200		440	55	7	770	110	80	350	4	300h7	400	M16
	225		440	60	7	800	140	80	400	8	350h7	425	M16
	250		440	65	8	812	140	85	500	8	450h7	550	M16
	280		440	75	8	812	140	85	500	8	450h7	550	M16
18,19,20	225		440	60	7	932	140	80	400	8	350h7	450	M16
	250		440	65	8	932	140	85	500	8	450h7	550	M16
	280		440	75	8	932	140	85	500	8	450h7	550	M16
	315*		440	80	11	967	170	100	600	8	550h7	660	M20

注:(1) "\*"所选直联电机机座号所对应的功率应满足传动能力表;

Note: (1) "\*" the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

"\*"表格中所示的法兰为标准型号的法兰, 如有异同请另咨询。

"\*" the flanges listed in the table are standard. Consult us if any deviation exists.

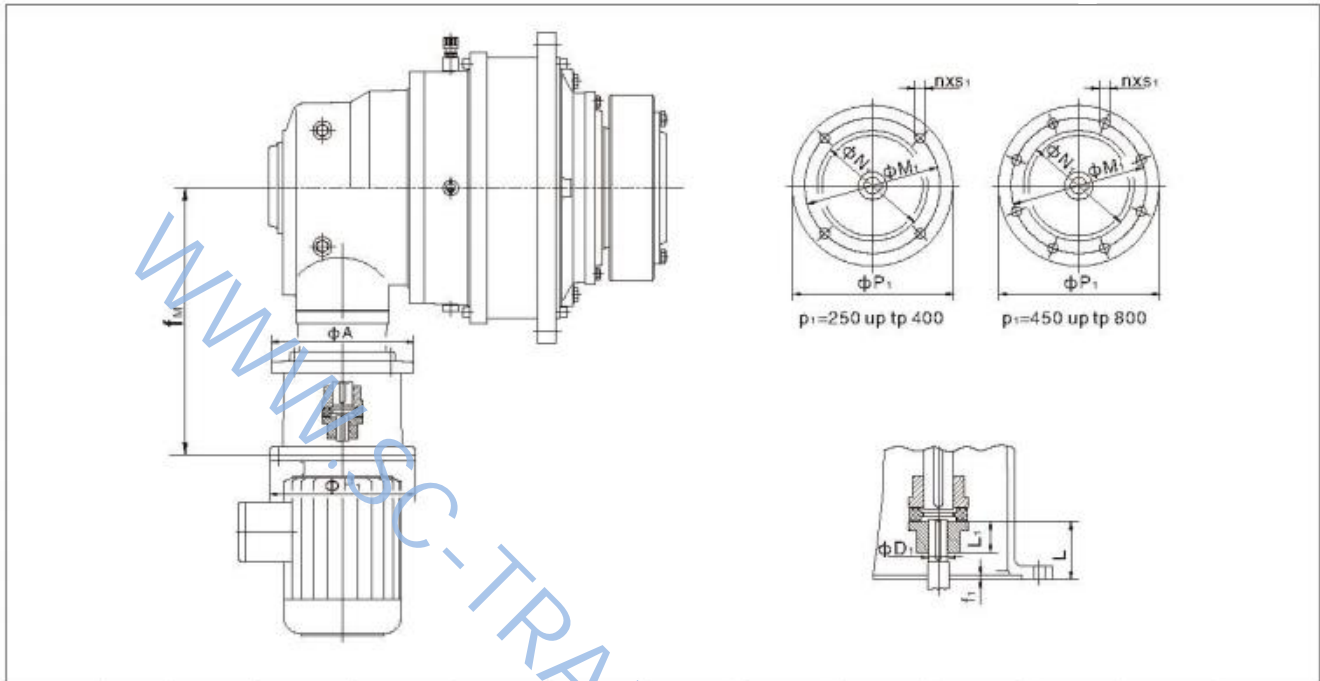
(2)侧面扭力臂组合, 请咨询。

(2) For combinations with torque arm on one side, please consult us.



类型: RP2L..

Type: RP2L..



RP2L..	电机 Motor (Y)	法兰 Flange (F)	A	$D_1$	$f_1$	$f_M$	$L_1$	L	$M_1$	$n$	$N_1$	$P_1$	$S_1$
9,10	160		440	42	6	543	75	110	300	4	250h7	350	M16
	180		440	48	6	543	75	110	300	4	250h7	350	M16
	200		440	55	7	543	75	110	350	4	300h7	400	M16
	225		440	60	7	575	80	140	400	8	350h7	450	M16
11,12	200		440	55	7	600	75	110	350	4	300h7	400	M16
	225		440	60	7	630	80	140	400	8	350h7	450	M16
	250		440	65	8	642	85	140	500	8	450h7	550	M16
13,14	225		440	60	7	732	85	140	400	8	350h7	450	M16
	250		440	65	8	732	85	140	500	8	450h7	550	M16
	280		440	75	8	732	85	140	500	8	450h7	550	M16
16,17	280		600	75	8	842	100	140	500	8	450h7	550	M16
	315*		650	80	11	872	100	170	600	8	550h7	660	M20
18,19,20	315*		650	80	11	987	100	170	600	8	550h7	660	M20
21,22,23,24	315		650	80	11	1122	125	170	600	8	550h7	660	M20
	355		650	95	11	1122	125	170	740	8	680h7	800	M20

注:(1) "\*"所选直联电机机座号所对应的功率应满足传动能力表;

"\*"表格中所示的法兰为标准型号的法兰,如有异同请另咨询。

(2)侧面扭力臂组合,请咨询。

Note: (1) "\*" the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

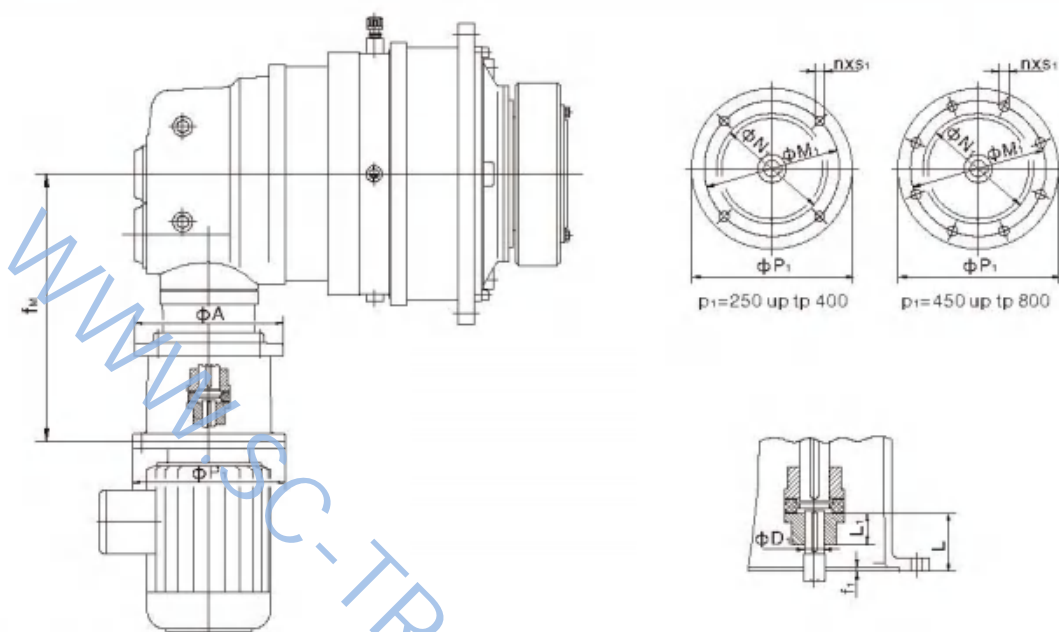
"\*" the flanges listed in the table are standard. Consult us if any deviation exists.

(2) For combinations with torque arm on one side, please consult us.



类型: RP3K..

Type: RP3K..



RP3K..	电机 Motor (Y)	法兰 Flange (F)	A	D <sub>1</sub>	f <sub>1</sub>	f <sub>2</sub>	L	L <sub>1</sub>	M <sub>1</sub>	N <sub>1</sub>	n	P <sub>1</sub>	S <sub>1</sub>
9, 10, 11 12, 13, 14	132		250	38	5	486	80	70	265	230h7	4	300	M12
	160		250	42	6	528	110	75	300	250h7	4	350	M16
	180		250	48	6	528	110	75	300	250h7	4	350	M16
16, 17	160		350	42	6	593	110	75	300	250h7	4	350	M16
	180		350	48	6	593	110	75	300	250h7	4	350	M16
	200		350	55	7	593	110	75	350	300h7	4	400	M16
18, 19, 20 21, 22	160		440	42	6	663	110	75	300	250h7	4	350	M16
	180		440	48	6	663	110	75	300	250h7	4	350	M16
	200		440	55	7	663	110	75	350	300h7	4	400	M16
	225		440	60	7	695	140	80	400	350h7	8	450	M16
	250		440	65	8	707	140	85	500	450h7	8	550	M16
23, 24 25, 26	200		440	55	6	770	110	80	350	300h7	4	400	M16
	225		440	60	7	800	140	80	400	350h7	8	450	M16
	250		440	65	7	812	140	85	500	450h7	8	550	M16
	280		440	75	8	812	140	85	500	450h7	8	550	M16
27, 28 29, 30	225		440	60	7	932	140	80	400	350h7	8	450	M16
	250		440	65	7	932	140	85	500	450h7	8	550	M16
	280		440	75	8	932	140	85	500	450h7	8	550	M16
	315*		440	80	11	967	170	100	600	550h7	8	660	M20

注:(1) "\*"所选直联电机机座号所对应的功率应满足传动能力表;

"\*\*"表格中所示的法兰为标准型号的法兰, 如有异同请另咨询。

(2)侧面扭力臂组合, 请咨询。

Note: (1) "\*" the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;

"\*\*" the flanges listed in the table are standard. Consult us if any deviation exists.

(2) For combinations with torque arm on one side, please consult us.

## 10. 润滑油

### Lubricant Oil

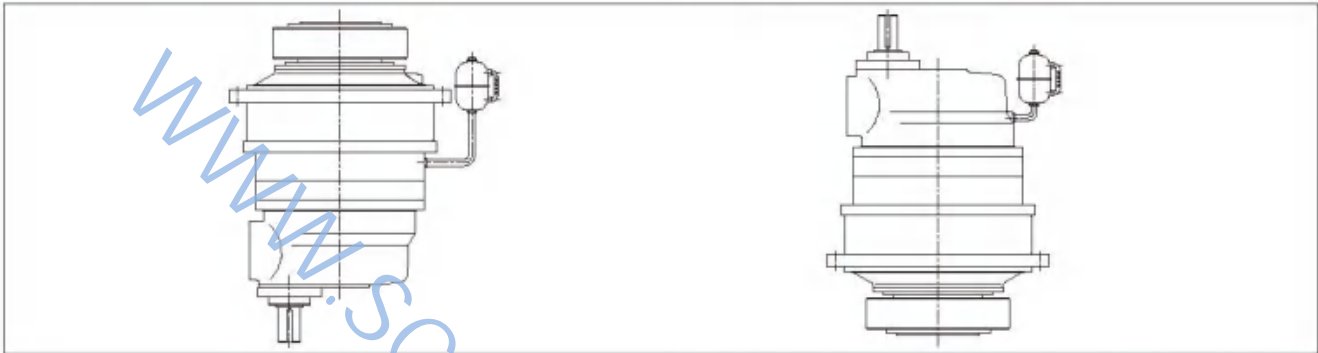


用于垂直安装时的补油箱

在垂直安装时通过补油箱供油润滑  
-900/600,910/610,920/620,930/630

Oil Compensating Tank for Vertical Mounting Position

Oil supply by compensating tank for vertical mounting position  
-900/600,910/610,920/620,930/630



在垂直安装时,标准配置中不包括用于为上方滚柱轴承供油的强制润滑。

为了保证供油,油位已作了相应的提升。

对于卧式安装的齿轮箱,其油量可以根据齿轮箱类型在相应的产品样本中查得。

对于垂直安装的齿轮箱,其所需油量约为上述油量的一倍。

齿轮箱油位可通过单独配置的补油箱观察,且补油箱的设计容积已经提前考虑到了运行状态下润滑油体积的变化,齿轮箱同时也通过补油箱透气。补油箱既可固定在齿轮箱体上,也可固定在用户设备的机架上。

补油箱底面大约在如下位置:

D<sub>2</sub> 向上: 输出端法兰的安装面  
D<sub>1</sub> 向上: 齿轮箱箱体的上缘

补油箱的实际容积和最低位置应在订单中确定。

In case of vertical mounting position, no forced lubrication is provided as standard to feed the overhead rolling bearings.

To ensure the lubricant supply, the oil level is increased accordingly.

For horizontal mounting position of the gear unit, please derive the oil quantity, depending on the type, from the respective page of the brochure.

For vertical mounting position, approximately twice the oil quantity is required.

The oil level is checked via an oil compensating tank fitted separately. The dimensions are set to accommodate the anticipated change in the volume of the oil in the operating condition. The unit is also vented via the tank. The oil tank can be attached either to the gear unit or to the customer's machine frame.

The bottom of the oil compensating tank is set at approximately the following level: if

D<sub>2</sub> upwards: Mounting surface output flange  
D<sub>1</sub> upwards: Upper edge primary gear housing

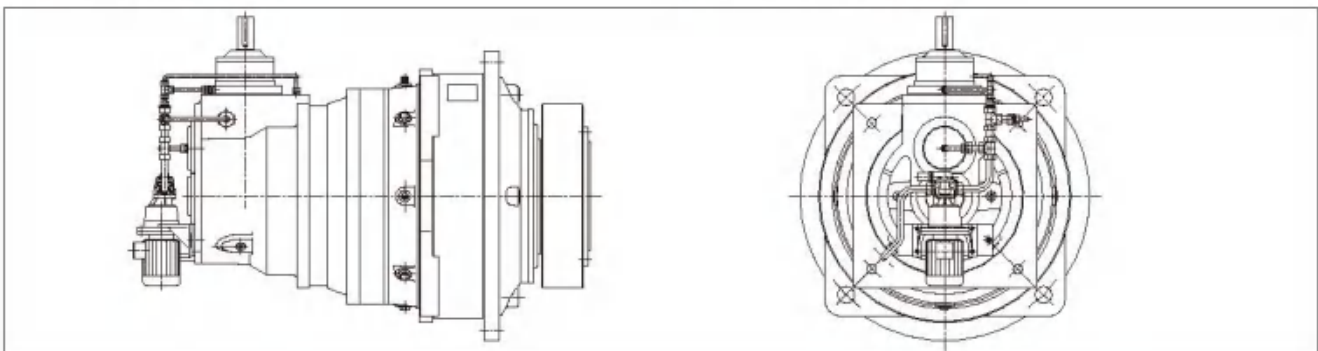
The actual dimension and final position will be decided when the order is placed

在卧式安装和上方驱动时通过电动泵供油润滑

-521, 531<sup>1)</sup> (所有规格)  
和511<sup>1)</sup> (从规格21起)

Oil supply by motor pumps for horizontal mounting position and drive from above

-521, 531<sup>1)</sup> (all sizes)  
and 511<sup>1)</sup> (above size 21)



1)轴的布置型式见第60页

1)For shaft arrangement, see page 60



注油量:

Oil quantity:

油量表 Oil level (L)							
规格 Type	RP2N..	RP2L..	RP2S..	RP2K..	RP3N..	RP3S..	RP3K..
9	6	6	6	6	7	7	7
10	8	8	8	8	9	9	9
11	12	12	12	12	13	13	13
12	16	16	16	16	17	17	17
13	20	20	20	20	21	21	21
14	32	32	32	32	33	33	33
16	40	40	40	40	42	42	42
17	56	56	56	56	60	60	60
18	66	66	66	73	70	70	70
19	82	82	82	82	85	85	85
20	75	75	75	75	75	75	75
21	110	110	110	110	115	115	115
22	95	95	95	95	105	105	105
23	130	130	130	130	140	140	140
24	125	125	125	125	135	135	135
25	190	190	190	190	195	195	195
26	160	160	160	160	170	170	170
27	245	245	245	245	250	250	250
28	205	205	205	205	220	220	220
29	305	305	305	305	310	310	310
30	255	255	255	255	280	280	280
31	380	380	380	380	390	390	390
32	315	315	315	315	360	360	360
33	460	460	460	460	470	470	470
34	380	380	380	380	430	430	430
35	645	645	645	645	645	645	645
36	535	535	535	535	535	535	535

注: 1) 在环境温度-10℃~+40℃时, JRP系列润滑油牌号为VG320 (ISO粘度等级), 附件代号V32。

2) 以上齿轮箱油量为JRP.N在B5安装方位、JRP.K/JRP.L/JRP.S为B53安装方位时的油量, 其它安装方位时的油量请来电咨询。






Note: 1) When ambient temperature is between -10℃~+40℃, VG320 (ISO viscosity class) should be used for JRP series and accessory code is V32.

2) The above oil levels are for JRP..N in mounting position B5 and JRP.K/JRP.L/JRP.S in mounting position B53. Other positions on request.

润滑油选择表

Selection of Oil Table



润滑油 Oil	40℃温度下 ISO-VG粘度 mm <sup>2</sup> /s标准 DIN51519 Viscosity ISO-VG At 40℃ in mm <sup>2</sup> /s, standard DIN 51519	润滑油选用实例 / Oil selection example					
			<b>Mobil</b>			长城 	
合成油 Synthetic oil	VG680	TOTAL CARTER SH680	GLYGOYLE HE 680	SHELL OMALA HD680			
	VG460	TOTAL CARTER SH460	GLYGOYLE HE 460	SHELL OMALA HD460	ENERSYN SG-XP460		
	VG320	TOTAL CARTER SH320	GLYGOYLE HE320	SHELL OMALA HD320			
	VG220	TOTAL CARTER SH220	GLYGOYLE 30	SHELL OMALA HD220	ENERSYN SG-XP220		
	VG150		GLYGOYLE 22				
	VG100						
矿物油 Mineral oil	VG680	TOTAL CARTER EP680	MOBIL GEAR 636	SHELL OMALA 680	ENERGOL GR-XF680	CKD680	CKD680
	VG460	TOTAL CARTER EP460	MOBIL GEAR 634	SHELL OMALA 460	ENERGOL GR-XF460	CKD460	CKD460
	VG320	TOTAL CARTER EP320	MOBIL GEAR 632	SHELL OMALA 320	ENERGOL GR-XF320	CKD320	CKD320
	VG220	TOTAL CARTER EP220	MOBIL GEAR 630	SHELL OMALA 220	ENERGOL GR-XF220	CKD220	CKD220
	VG150		MOBIL GEAR 629				
	VG100						



## 11. 轴的布置型式 Identifications of Shaft Arrangements

		齿轮箱卧式安装 Horizontal gear unit position 5...		齿轮箱立式安装 Vertical gear unit position 9... 1)		6...							
0	RP.N.												
1	RP.S.	500	511	900	600								
带斜齿轮级的平行轴行星齿轮箱 Combined helical gear planetary gear units		512	513										
		514	515					910	610				
		带伞齿轮和斜齿轮级的直交轴行星齿轮箱 Combined bevel-helical gear planetary gear units						2	RP.K.				
								521	522				
带伞齿轮的直交轴行星齿轮箱 Combined bevel gear planetary gear units		3	RP.L.										
		531	532					930	630				
		533	534										
		扭力臂支撑 Torque reaction arm						5	551	552	*)从输入轴端观察 **)敬请垂询		
553	554			*)Viewing on input shaft **)please consult us									
555	556												

1)必须检查润滑油供给情况

1)Lubricant supply must be checked



## 12.防爆保护 Explosion Protection



防爆要求  
按照 ATEX 95

JRP 行星齿轮箱可以根据用户的需要提供按照 94/9/EC 规范认证的改进型结构。这种齿轮箱可以在有爆炸危险的环境中使用。

应用：设备特性类型 2+3



Explosion protection  
according to ATEX 95

JRP planetary gear units are certified according to directive 94/9/EC and may be used in hazardous locations.

Surface application: categories 2+3

环境说明 Description of the surroundings		设备特性对安全要求的适配 Assignment of equipment categories to safety requirements		
爆炸危险的持续时间 Explosive atmospheres occurring:	爆炸危险的起因 Explosive atmospheres caused by:	特性类型: Category:	安全要求: Safety requirements:	在下列情况下安全: Safe if taking into account
量化数据仅用于应用选型 The quantification serves for orientation only.	气体, 雾, 蒸汽 Gases, vapours, mists	粉尘 Dust		
不断发生, 频繁发生, 每年大于1000小时 Continuously, frequently, for more than 1,000 h/yr	Zone 0	Zone 20	特性类型 1 Category 1	很高 very high
偶尔发生, 短时发生, 每年在10和1000小时之间 Occasionally, for a short term, between 10 and 1,000 h/yr	Zone 1	Zone 21	特性类型 2 Category 2	高 high
很少发生, 短时发生, 每年少于10小时 Infrequently, for a short term, less than 10 h/yr	Zone 2	Zone 22	特性类型 3 Category 3	一般 normal
				很少发生爆炸 Rarely occurring disturbances
				爆炸有时发生 Normally occurring disturbances
				在正常运行条件下 Normal operating conditions



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### 1. 型号表示

### Model Designation

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
	产品代码 RP-行星齿轮箱	行星齿轮传动级数 1,2,3,4	齿轮箱类型 N-标准型(同轴式) S-一级斜齿平行轴 L-一级伞齿直交轴 K-一级伞齿斜齿直交轴	输出轴型式 A-带锁紧盘的空心轴输出 B-带平键的实心轴输出 C-带渐开线花键的空心轴输出 D-带渐开线花键的实心轴输出	规格 (01.....8)	公称传动比 见: P71-91	安装的位置 见: P109	附件 见: P100-107

<b>J</b>	<b>RP</b>	<b>1</b>	<b>N</b>	<b>B</b>	<b>02</b>	<b>3.50</b>	<b>500</b>	<b>00</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
	Product Code RP - Planetary Gear Units	No. of planetary gear stages 1,2,3,4	Type of planetary gear N-Standard(coaxial) S-Helical gear stage L-Bevel gear stage K-Bevel-helical gear stage	Output shaft design A-Hollow Shaft Output with Locking Plate B-Solid Shaft Output with Flat Key C-Hollow Shaft Output with Involute Spline D-Solid Shaft Output with Involute Spline	Size (01.....8)	Nominal Ratios See page 71-91	Mounting positions See page 109	Add-on Pieces See page 100-107



## 2. 技术参数说明

### Technical Descriptions



$i_{eff}$ : 传动比

它表示齿轮箱输入转速与输出转速的比值。

样本提供模块化设计的范围，如需要其他传动比请咨询杰牌传动。

$T_2$ : 输出扭矩[Nm]

输出扭矩是指齿轮箱设计寿命为10000小时、服务系数等于1时的持续扭矩，根据ISO6336计算。

输出扭矩根据不同的输入转速、不同的传动比按样本进行查询。

$T_{2max}$ : 最大输出扭矩[Nm]

最大输出扭矩是指短时间内允许承受的最大扭矩。

$T_N$ : 额定输出扭矩[Nm]

额定输出扭矩根据齿轮箱规格确定，见P70。

$P_2$ : 额定功率[kW]

$P_T$ : 热功率 [kW]

指在一定条件下连续运转，齿轮箱热平衡温升不超过最大允许值的功率。

如果 $P_2 > P_T$ ，齿轮箱需要辅助冷却装置

$n_1$ : 输入转速 [rpm]

$n_2$ : 输出转速[rpm]

$i_{eff}$ : Ratio

It represents the ratio between gear unit input and output speed.

Samples provide modular design units, such as consult JIE DRIVE need other transmission ratio

$T_2$ : Output torque [Nm]

Gear unit output torque referred to 10000 hours of operation, calculated according to I.S.O.(D.P.6336).

Output torque according to the different ratio of different input speed, according to the sample.

$T_{2max}$ : Max. torque[Nm]

Max: permissible output torque, as peak or for short periods.

$T_N$ : Nominal output torque[Nm]

The conventional torque characterizing the size of the gear unit, see page 70.

$P_2$ : Nominal power[kW]

$P_T$ : Thermal power [kW]

The power that can be transmitted continuously by the gear unit, in given operating conditions, relevant to the max.

If  $P_2 > P_T$ , the gear unit need auxiliary cooling device.

$n_1$ : Input speed [rpm]

$n_2$ : output speed [rpm]

## 3. 服务系数

## Service Coefficient

样本所列系数均为经验值，使用这些系数的前提条件是所述机械设备应符合通常的设计规范和载荷条件。如遇特殊情况，请及时与我们联系。

The listed factors are empirical values. Prerequisite for their application is that the machinery and equipment mentioned correspond to generally accepted design and load specifications. In case of deviations from standard conditions, please refer to us.

起动系数 Cs/Factor Cs

Cs	启停次数/小时 Starts per hour			
	1-5	6-25	26-100	101-200
	1	1.05	1.15	1.25

使用系数KA

工作机		KA	工作机		KA	工作机		KA
<b>搅拌机</b>			<b>食品行业</b>			输送带	树皮碎片	1.25
纯液体	1	粮食加工	1	树干	2			
液体和固体混合	1.25	和面机	1.25	开槽机	1.25	烘干机	输送机	1.5
液体-变密度	1.25	绞肉机	1.25	挤出机	1.5			
<b>粘土加工设备</b>			<b>升降机械</b>			破碎机	破碎	1.5
压砖机	1.75	重负荷	1.75	旋转	1.5		振动	2
压块机	1.75	中负荷	1.75	箕斗提升机	1.25	矿筛	施胶压榨	1.25
压实机	2	箕斗提升机	1.25	翻转	1.25		超级压光机	1.25
<b>输送机械</b>			<b>洗衣设备</b>			增稠器{交流}	1.5	
通用	蜗杆输送机	1	翻转	1.25	木材加工	增稠器{直流}	1.25	
	均匀装载或输送	1	洗衣	1.5	输送机	清洗{交流}	1.5	
重载	非均匀输送	1.25	连续循环	1.5	连续循环	清洗{直流}	1.25	
	往复运动或有振动	1.75	原木加工	1.75	分批混合器	1.75		
<b>起重机械</b>			刨床	1.75	连续混合器	1.5		
干船坞	主起升机构	2.5	输送	1.25	压光机	1.5		
	辅起升机构	2.5	去皮	1.75	<b>橡胶行业</b>			
	悬臂起重机	2.5	链条传动	1.5	分批混合器	1.75		
	回转机构	2.5	金属加工		连续混合器	1.5		
集装箱	牵引机构	3	翻转	2	压光机	1.5		
	主葫芦	3	推钢机	1.5	砂磨机	1.25		
工业应用	悬臂起重机	2	切断	2	<b>污水处理</b>			
	主提升	2.5	拉丝	1.25	格栅清污机	1.25		
	辅助设备	2.5	绕线	1.5	化学进料器	1.5		
	桥式	3	金属带加工		浮渣破碎机	1.5		
搬运车	3	限动器	1.25	混合器	1.5			
<b>压碎机</b>			卷取机&开卷机	1	污泥收集器	1.25		
石头或矿石	1.75	边缘修剪机	1.25	浓缩器	1.5			
<b>挖泥机</b>			压平机	1.25	真空过滤器	1.5		
电缆卷轴	1.25	夹棍	1.25	废料切碎机	1.25	过滤	空气洗涤	1
输送机	1.25	废料切碎机	1.25	切断	2	旋转石	1.25	
采掘机机头	2	纵剪机	1.25	绞车	1.25	<b>糖加工</b>		
振筛驱动器	1.75	水泥工业		升降机械		甜菜切丝机	2	
堆料机	1.25	回转窑	1.5	斗式提升机	1.25	甘蔗切碎机	1.5	
绞车	1.25	干燥&冷却器	1.5	自动扶梯	1	破碎机	1.5	
<b>升降机</b>			混凝土搅拌	1.25	挤出机	1.75		
斗式提升机	1.25	造纸机械		通用	1.5	<b>纺织行业</b>		
自动扶梯	1	搅拌机	1.5	塑料	1.5	配料机	1.25	
<b>挤出机</b>			搅拌机-纯液	1.25	固定驱动	1.75	压光机	1.25
通用	1.5	压光机	1.25	橡胶	1.75	连续螺杆操作	1.75	烘干机
塑料	1.5	碎木机	2	间歇螺杆操作	1.75	挡板	1.25	
橡胶	1.75	木片给料机	1.5	给料机	1.25	输送带机构	1.25	
给料机	1.25	滚涂机	1.25					



振筛



Application factor

Application factor					
Driven machine		KA	Driven machine		KA
<b>Agitators/Mixer</b>			<b>Food industry</b>		
Pure liquids		1	Cereal cooker		1
Liquid and solids		1.25	Dough mixer		1.25
Liquid –variable density		1.25	Meat grinders		1.25
<b>Clay working machine</b>			<b>Hoist</b>		
Brick press		1.75	Heavy duty		1.75
Briquette machine		1.75	Medium duty		1.75
Compactors		2	Skip hoist		1.25
<b>Conveyors</b>			<b>Laundry</b>		
General	Worm conveyor	1	Tumblers		1.25
	Uniform loaded or fed	1	Washers		1.5
Heavy duty	Not uniform fed	1.25	<b>Lumber industry</b>		
	Reciprocating or shaker	1.75	Conveyors –burner burner		1.25
<b>Cranes</b>			Continuous cycle		1.5
Dry dock	Main hoist	2.5	Log processing		1.75
	Auxiliary Hoist	2.5	Planer		1.75
	Boom Hoist	2.5	Transfer		1.25
	Slewing drive	2.5	Debarking drums		1.75
	Traction drive	3	Transfers –chain		1.5
Container	Main hoist	3	<b>Metal mills</b>		
	Boom Hoist	2	Reversing		2
Industrial duty	Main	2.5	Slab pushers		1.5
	Auxiliary	2.5	Shears		2
	Bridge	3	Wire drawing		1.25
	Trolley travel	3	Wire winding machine		1.5
<b>Crusher</b>			<b>Metal strip processing machinery</b>		
Stone or ore		1.75	Limit actuator		1.25
<b>Dredges</b>			Coilers & uncoilers		1
Cable reel		1.25	Edge trimmers		1.25
Conveyors		1.25	Flatteners		1.25
Cutter head drives		2	Pinch rolls		1.25
Screen drives		1.75	Scrap choppers		1.25
Stackers		1.25	Shears		2
Winches		1.25	Slitters		1.25
<b>Elevators</b>			Mills . rotary type		
Bucket		1.25	Cement kilns		1.5
Escalators		1	dryers & coolers		1.5
<b>Extruders</b>			Mixer concrete		1.25
General		1.5	<b>Paper mills</b>		
Plastic	Variable speed drive	1.5	Agitator (mixer)		1.5
	Fixed speed drive	1.75	Agitator for pure liquors		1.25
Rubber	Continuous screw operation	1.75	Calender		1.25
	Intermittent screw operation	1.75	Chipper		2
Feeders	Apron	1.25	Chip feeder		1.5
	Belt	1.25	Coating rolls		1.25
			<b>Plastic industry</b>		
			Batch mixers		1.75
			Continuous mixers		1.5
			Calenders		1.5
			<b>Rubber industry</b>		
			Batch mixers		1.75
			Continuous mixers		1.5
			Calenders		1.5
			Sand muller		1.25
			<b>Sewage disposal equipment</b>		
			Bar screens		1.25
			Chemical feeders		1.5
			Dewatering screens		1.5
			Mixer		1.5
			Sludge collectors		1.25
			Thickeners		1.5
			Vacuum filters		1.5
			Screens	Air washing	1
				Rotary –stone	1.25
			<b>Sugar industry</b>		
			Beet slicer		2
			Cane knives		1.5
			Crushers		1.5
			Mills		1.75
			<b>Textile industry</b>		
			Batchers		1.25
			Calenders		1.25
			Dryers		1.25

### 4. 径向和轴向载荷选型说明

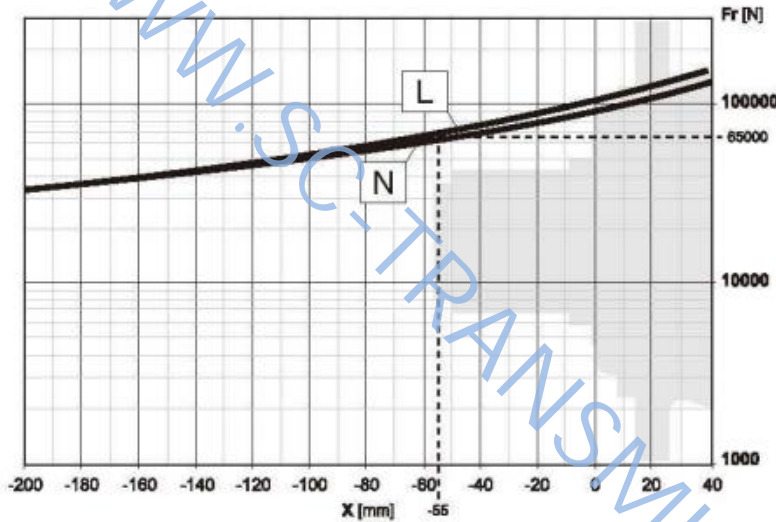
### Radial and axial load Selection Instruction

加载在输入/输出轴的径向力 $F_r$ [N]

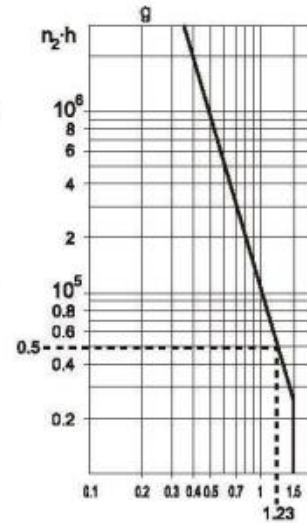
图表A是轴承使用条件为 $n_2 \cdot h=10^5$ 时输出轴允许承受的径向力 $F_r$ 。对于不同的轴承使用条件， $F_r$ 应乘以图表B的修正系数C，修正系数C最大允许超过1.5。

Load on output /input shafts  $F_r$ [N].

The catalogue gives the diagrams of permissible  $F_r$  radial loads on the Output shafts referred  $n_2 \cdot h=10^5$  of bearings. For different durations, the loads must be multiplied by the coefficient C (obtained from diagram B) which must not exceed the value of 1.5 regardless of the life.



图表A  
Diagram A



图表B  
Diagram B

计算举例

已知条件:

齿轮箱型号 JRP2NB4

径向载荷  $F=80\text{kN}$

加载位置  $X=-55\text{mm}$

输出转速  $n_2=20\text{rpm}$

径向力校核:  $F_r=65\text{kN}$  (查图表A)

$$C = \frac{F}{F_r} = 1.23$$

$$n_2 \cdot h = 0.5 \times 10^5 \text{ (查图表B)}$$

轴承寿命  $h=0.5 \times 10^5 / 20 = 2500\text{hours}$

各型号的输入轴输出轴允许径向力 $F_r$ ，  
可以查看各型号相应的参数。

Calculation example

Known criteria:

Gear unit size JRP2NB4

Radial load  $F=80\text{kN}$

Load position  $X=-55\text{mm}$

Output speed  $n_2=20\text{rpm}$

Radial load capacity  $F_r=65\text{kN}$  (as per diagram A)

$$C = \frac{F}{F_r} = 1.23$$

$$n_2 \cdot h = 0.5 \times 10^5 \text{ (as per diagram B)}$$

Bearing life  $h=0.5 \times 10^5 / 20 = 2500\text{hours}$

Each type of input shafts and Output shafts allows the radial force  $F_r$ , can view the corresponding parameters of various sizes.

## 5.热功率PT[kW]

### Thermal Power

齿轮箱的热功率数值 $P_T$ 可以在各型号的参数中查找。

使用时必须满足以下条件:

- 飞溅润滑
- 水平安装
- 齿轮箱输入转速1500rpm
- 最高油温80°C (VG150)
- 环境温度20°C
- 室内大空间

如不满足条件应考虑以下系数

The thermal power of the gear units are given in the tables summarizing the technical performance of the various reduction stages.

When using must meet the following conditions:

- With splash lubrication
- Horizontally mounted
- At a gear unit input speed of 1500rpm
- For a max. oil temperature of 80°C(oil Vg150)
- At an ambient temperature of 20°C
- Large interior space

If does not meet the conditions, should consider the following factor.

K系数

K Factor

工作时间h/天 Hours of work per day	环境温度 [°C] / Ambient temperature				
	10°	20°	30°	40°	50°
10	1.15		0.85	0.7	0.6
8	1.25	1.1	1	0.85	0.7
6	1.4	1.25	1.1	1	0.85
4	1.6	1.4	1.25	1.1	1
2	1.8	1.6	1.4	1.25	1.1

S系数

S Factor

	输入转速[rpm] Input speed			
	1750	1500	1000	500
S	0.94	1	1.05	1.1

R系数

R Factor

	狭小空间Small space	室内大空间Large space	室外大空间Outdoors
R	0.7	1.00	1.35

修正后的热功率值:  $PT1=PT.K.S.R$

检验是否满足条件:  $PT1>P$

如不满足条件, 必须有一个辅助的冷却装置。

The revised thermal power value:  $PT1=PT.K.S.R$

Check whether meet the conditions:  $PT1>P$

If does not meet the conditions, must have a secondary cooling device.



## 6. 选型举例

## Example Selecting Gear Unit

已知

原动机:

电机功率: 1.5kW

电机转速: 1500rpm

工作机:

输送带, 不均匀输送

每天运行时间: 10小时/天

每小时启动次数: 1

输出扭矩: 4900 Nm

最大启动扭矩: 9800 Nm

输出转速: 1.85rpm

设计寿命: 10000 h

安装位置: 水平安装

环境温度: 30 °C

室内大空间安装

齿轮箱选型

6.1 所需传动比:  $1500/1.85=810$ 

6.2 确定额定扭矩:

使用系数 $K_A$ : 1.25启动系数 $C_S$ : 1齿轮箱扭矩:  $T_{2R}=4900 \times K_A \times C_S=6125 \text{ Nm}$ ,选择的齿轮箱应满足:  $T_2 > T_{2R}$ 按额定输出扭矩 $T_N$ 选择齿轮箱, 规格4齿轮箱 $T_N=6400 \text{ Nm} > T_{2R}$ 在4规格中查找减速比 $i_{\text{eff}}$ , 最接近所需传动比

810的是771.8。

 $T_2=7348 \text{ Nm} > T_{2R}$ , JRP4NB4满足扭矩要求。6.3 确定传动比:  $i_{\text{eff}}=771.8$ 6.4 校核最大扭矩:  $T_{2\text{max}}=10000 \text{ Nm} > 9800 \text{ Nm}$ 

6.5 校核热功率:

 $P_T=8 \text{ kW}$  $K=0.85$  $P_{T1}=8 \times 0.85=6.8 \text{ kW}$ 工作机功率:  $P_2=4900 \times 1.9/9550=0.97 \text{ kW}$  $P_{T1} > P_2$ , 因此齿轮箱不需要辅助冷却装置。

Known

Prime mover

Electric motor: 1.5kW

Motor speed: 1500rpm

Driven machine

Conveyor belt not uniformly fed

Duty: continuous 10 hours a day

Number of starts per hour: 1

Output torque: 4900 Nm

Max. torque on start: 9800 Nm

Output speed: 1.85rpm

Required transmission life: 10000 h

Operating position: horizontal

Ambient temperature: 30 °C

Working site large space

Gear unit selection

6.1 Ratio required:  $1500/1.85=810$ 

6.2 Determine the rated torque

Application factor  $K_A$ : 1.25Start the coefficient  $C_S$ : 1The gear unit torque:  $T_{2R}=4900 \times K_A \times C_S=6125 \text{ Nm}$ ,the gear unit to be selected must have a  $T_2 > T_{2R}$ 

reference torque for gear unit selection.



According to the rated output torque  $T_N$  select gear unit, size 4 gear unit  $T_N=6400 \text{ Nm} > T_{2R}$ .From the "technical data" choose the " $i_{\text{eff}}$ " value that isnearest to the requested  $i=810$ : this  $i_{\text{eff}}$  will be 771.8. $T_2=7348 \text{ Nm} > T_{2R}$ , JRP4NB4 meet torque requirements.6.3 Calculation of transmission ratio:  $i_{\text{eff}}=771.8$ 6.4 Checking the max. torque:  $T_{2\text{max}}=10000 \text{ Nm} > 9800 \text{ Nm}$ 

6.5 Checking the thermal power:

 $P_T=8 \text{ kW}$  $K=0.85$  $P_{T1}=8 \times 0.85=6.8 \text{ kW}$ Driven machine power:  $P_2=4900 \times 1.9/9550=0.97 \text{ kW}$ As  $P_{T1} > P_2$  no gear unit auxiliary cooling system is required.

## 7. 规格与扭矩

### Specification & Torque

规格 Type	i <sub>eff</sub>	T <sub>N</sub> [Nm]	输出轴尺寸 Output shafts dimension	
			 DIN5482	 实心轴 $\phi$ Solid shaft
01	3.38-3282	1000	B40x36	42
02	3.08-3235	2100	B58x53	65
03	15.37-3097	3800	B58x53	65
1	15.37-3170	3800	B58x53	65
2	3.50-3301	3800	B58x53	65
3	3.50-3301	3800	B58x53	65
4	3.50-3170	6400	B70x64	65
5	12.25-201.0	6400	B70x64	65
6	4.08-3207	9200	B80x74	90
7	3.90-3460	13000	B80x74	100
8	19.50-272.7	13000	B80x74	100





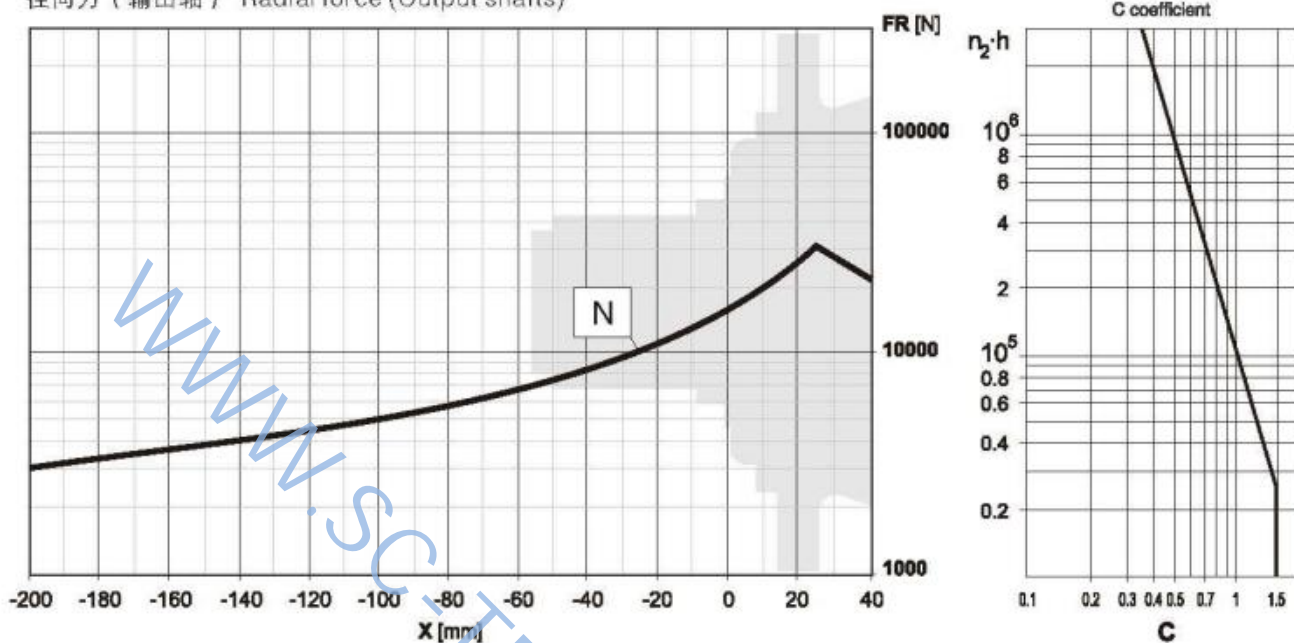
JRP...01

i <sub>ref</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP1N...01											
3.38	444	410	19.1	296	463	14.4	148	570	8.8	1600	12
4.39	342	431	15.4	228	487	11.6	114	600	7.2	1600	
6	250	412	10.8	167	453	7.9	83	510	4.5	1600	
6.94	216	387	8.8	144	407	6.2	72	457	3.5	1600	
10.5	143	206	3.1	95	213	2.1	47.6	224	1.1	1600	
JRP2N...01											
11.42	131	591	8.1	88	667	6.1	43.8	821	3.8	1600	8
14.84	101	639	6.8	67	722	5.1	33.7	889	3.1	1600	
19.27	78	672	5.5	52	759	4.1	25.9	816	2.2	1600	
20.28	74	702	5.4	49.3	793	4.1	24.7	916	2.4	1600	
23.46	64	733	4.9	42.6	828	3.7	21.3	921	2.1	1600	
26.34	57	738	4.4	38	803	3.2	19	825	1.6	1600	
30.47	49.2	771	4	32.8	808	2.8	16.4	829	1.4	1600	
36	41.7	561	2.4	27.8	589	1.7	13.9	636	0.93	1600	
41.64	36	571	2.2	24	599	1.5	12	646	0.81	1600	
48.16	31.1	512	1.7	20.8	537	1.2	10.4	581	0.63	1600	
JRP3N...01											
65.14	23	918	2.2	15.4	931	1.5	7.7	952	0.77	1600	5
68.55	21.9	920	2.1	14.6	933	1.4	7.3	954	0.73	1600	
79.29	18.9	925	1.8	12.6	937	1.2	6.3	958	0.63	1600	
89.03	16.8	928	1.6	11.2	941	1.1	5.6	961	0.57	1600	
103	14.6	933	1.4	9.7	945	1	4.9	966	0.49	1600	
115.6	13	836	1.1	8.6	847	0.77	4.3	865	0.39	1600	
121.7	12.3	938	1.2	8.2	950	0.82	4.1	970	0.42	1600	
140.7	10.7	943	1.1	7.1	955	0.71	3.6	973	0.36	1600	
162.8	9.2	947	0.91	6.1	959	0.62	3.1	979	0.32	1600	
182.8	8.2	848	0.73	5.5	859	0.49	2.7	877	0.25	1600	
211.4	7.1	852	0.63	4.7	863	0.43	2.4	880	0.22	1600	
216	6.9	684	0.5	4.6	732	0.36	2.3	799	0.19	1600	
246.3	6.1	959	0.61	4.1	971	0.41	2	990	0.21	1600	
276.6	5.4	859	0.49	3.6	870	0.33	1.8	887	0.17	1600	
319.9	4.7	863	0.42	3.1	873	0.29	1.6	900	0.15	1600	
372.6	4	824	0.35	2.7	846	0.24	1.3	883	0.12	1600	
378	4	759	0.32	2.6	796	0.22	1.3	854	0.12	1600	
437.2	3.4	786	0.28	2.3	800	0.19	1.1	873	0.11	1600	
484	3.1	874	0.28	2.1	884	0.19	1	961	0.1	1600	
661.5	2.3	800	0.19	1.5	836	0.13	0.76	930	0.07	1600	
765.1	2	772	0.16	1.3	823	0.11	0.65	915	0.06	1600	

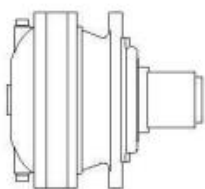




径向力 (输出轴) Radial force (Output shafts)



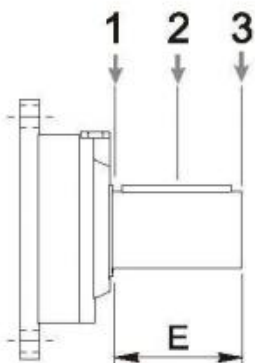
轴向力 (输出轴) Axial force (Output shafts)



$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	9000
$F_{a \text{ max}}$ [N]	9000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r \text{ (N)}}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

JRP 行星齿轮箱 Planetary Gear Units

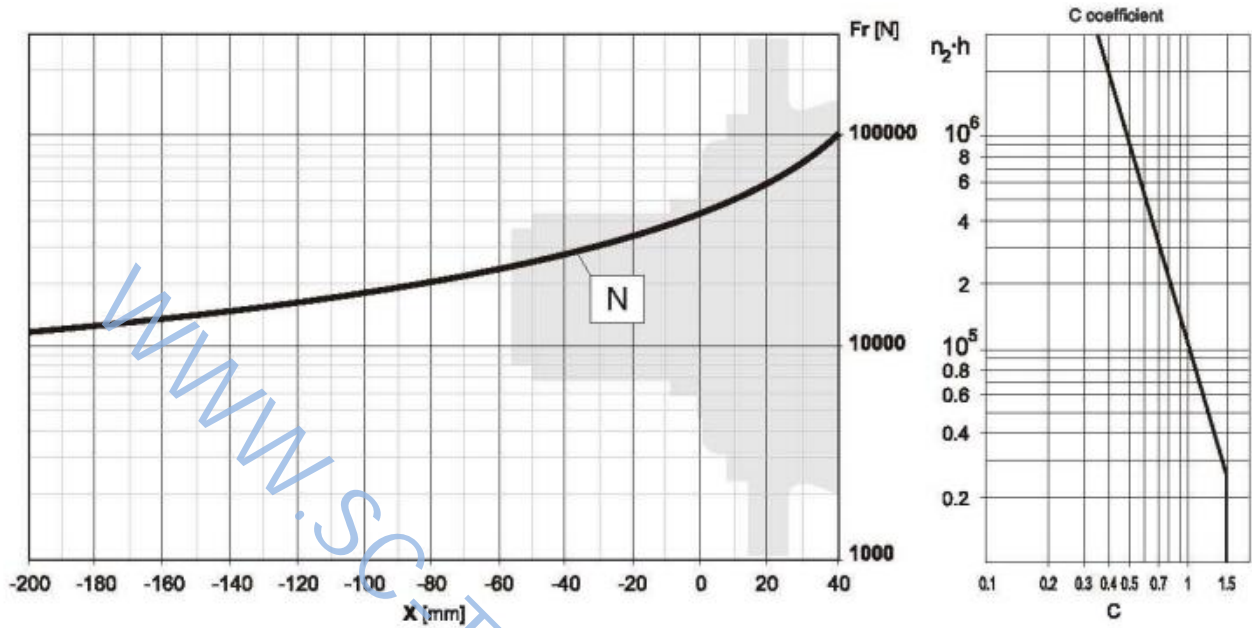
JRP...02

i <sub>ev</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>T</sub> [kW]
	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP1N...02											
3.08	487	888	45.3	325	1003	34.1	162	1235	21	2800	20
3.5	429	972	43.6	286	1098	32.9	143	1351	20.2	2800	
4.13	363	1005	38.2	242	1135	28.8	121	1397	17.7	2800	
5.17	290	1045	31.8	193	1159	23.5	97	1287	13	2800	
6	250	1001	26.2	167	1077	18.8	83	1187	10.4	2800	
7.25	207	863	18.7	138	924	13.3	69	1015	7.3	2800	
JRP2N...02											
10.41	144	1263	19.1	96	1427	14.4	48	1756	8.8	2800	12
11.83	127	1401	18.6	85	1582	14	42.3	1948	8.6	2800	
13.52	111	1329	15.4	74	1501	11.6	37	1848	7.2	2800	
15.37	98	1510	15.4	65	1705	11.6	32.5	2036	6.9	2800	
18.13	83	1566	13.6	55	1715	9.9	27.6	1840	5.3	2800	
21	71	1445	10.8	47.6	1585	7.9	23.8	1787	4.5	2800	
22.7	66	1348	9.3	44.1	1411	6.5	22	1515	3.5	2800	
24.78	61	1697	10.8	40.4	1772	7.5	20.2	1895	4	2800	
28.66	52	1600	8.6	34.9	1683	6.2	17.4	1890	3.5	2800	
31.02	48.4	1397	7.1	32.2	1458	4.9	16.1	1561	2.6	2800	
35.88	41.8	1419	6.2	27.9	1480	4.3	13.9	1582	2.3	2800	
41.64	36	1305	4.9	24	1360	3.4	12	1453	1.8	2800	
50.32	29.8	1116	3.5	19.5	1164	2.4	9.9	1246	1.3	2800	
JRP3N...02											
59.36	25.3	2071	5.5	16.8	2276	4	8.4	2514	2.2	2800	8
61.28	24.5	1861	4.8	16.3	1933	3.3	8.2	2078	1.8	2800	
70.98	21.1	2121	4.7	14.1	2201	3.2	7	2471	1.8	2800	
82.1	18.3	2150	4.1	12.2	2225	2.8	6.1	2545	1.6	2800	
92.19	16.3	2172	3.7	10.8	2259	2.6	5.4	2606	1.5	2800	
106.6	14.1	2201	3.2	9.4	2329	2.3	4.7	2683	1.3	2800	
108.8	13.8	1963	2.8	9.2	2035	2	4.6	2341	1.1	2800	
126	11.9	1963	2.4	7.9	2062	1.7	4	2228	0.93	2800	
145.7	10.3	1999	2.2	6.9	2097	1.5	3.4	2263	0.81	2800	
161.3	9.3	2333	2.3	6.2	2536	1.6	3.1	2800	0.91	2800	
172	8.7	2049	1.9	5.8	2231	1.4	2.9	2567	0.78	2800	
198.9	7.5	2113	1.7	5	2221	1.2	2.5	2401	0.63	2800	
220.5	6.8	2099	1.5	4.5	2196	1	2.3	2364	0.56	2800	
260.2	5.8	2235	1.3	3.8	2428	0.98	1.9	2785	0.56	2800	
289	5.2	1583	0.86	3.5	1727	0.63	1.7	1994	0.36	2800	
325.7	4.6	1833	0.88	3.1	1995	0.64	1.5	2297	0.37	2800	
JRP4N...02											
360.4	4.2	2748	1.2	2.8	2800	0.82	1.4	2800	0.41	2800	4
404.7	3.7	2800	1.1	2.5	2800	0.73	1.2	2800	0.35	2800	
468.1	3.2	2800	0.94	2.1	2800	0.62	1.1	2800	0.32	2800	
502.5	3	2554	0.8	2	2766	0.58	0.99	2800	0.29	2800	
569.8	2.6	2800	0.76	1.8	2800	0.53	0.88	2800	0.26	2800	
639.8	2.3	2800	0.67	1.6	2800	0.47	0.78	2800	0.23	2800	
708.2	2.1	2800	0.62	1.4	2800	0.41	0.71	2800	0.21	2800	
835.7	1.8	2800	0.53	1.2	2800	0.35	0.6	2800	0.18	2800	
892.1	1.7	2800	0.5	1.1	2800	0.32	0.56	2800	0.16	2800	
1032	1.5	2800	0.44	0.97	2800	0.28	0.48	2800	0.14	2800	
1120	1.3	2800	0.38	0.89	2800	0.26	0.45	2800	0.13	2800	
1323	1.1	2659	0.32	0.76	2789	0.22	0.38	2800	0.11	2800	
1380	1.1	2641	0.3	0.72	2800	0.21	0.36	2800	0.11	2800	
1561	0.96	2800	0.28	0.64	2800	0.19	0.32	2800	0.09	2800	
1806	0.83	2800	0.24	0.55	2800	0.16	0.28	2800	0.08	2800	
1999	0.75	2800	0.22	0.5	2800	0.15	0.25	2800	0.07	2800	
2315	0.65	2800	0.19	0.43	2800	0.13	0.22	2800	0.06	2800	
2615	0.57	2783	0.17	0.38	2800	0.11	0.19	2800	0.06	2800	
2732	0.55	2800	0.16	0.37	2800	0.11	0.18	2800	0.05	2800	
3160	0.47	2800	0.14	0.32	2800	0.09	0.16	2800	0.05	2800	

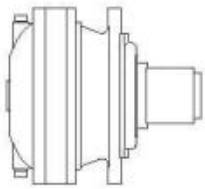


JRP 系列行星齿轮箱  
Series Planetary Gear Units

径向力 (输出轴) Radial force (Output shafts)



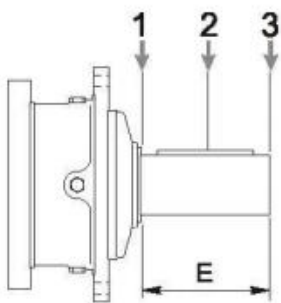
轴向力 (输出轴) Axial force (Output shafts)



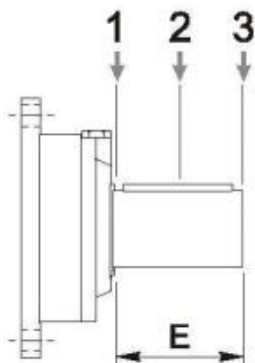
$F_a \text{ din}$   
 $F_a \text{ max}$

	法兰安装/Flange-mounted
$F_a \text{ din}$ [N]	35000
$F_a \text{ max}$ [N]	60000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_r$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200



	E	$F_r$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700



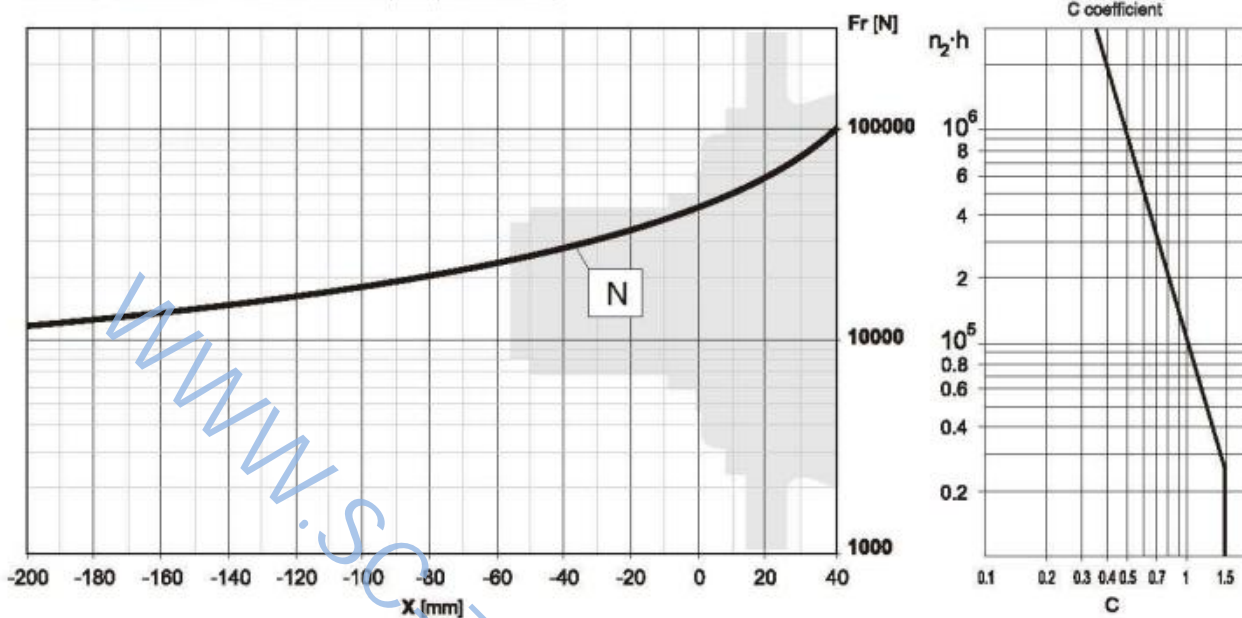
JRP...03

i <sub>en</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]		
JRP2N...03											
15.37	98	1510	15.4	65	1705	11.6	32.5	2100	7.2	5600	12
17.47	86	2121	19.1	57	2395	14.4	28.6	2732	8.2	6000	
20.28	74	2206	17.1	49.3	2314	12	24.7	2494	6.4	6000	
22.7	66	2231	15.4	44.1	2519	11.6	22	2805	6.5	6000	
26.34	57	2276	13.6	38	2383	9.5	19	2560	5.1	6000	
31.02	48.4	2134	10.8	32.2	2342	7.9	16.1	2639	4.5	6000	
36	41.7	2358	10.3	27.8	2463	7.2	13.9	2640	3.8	6000	
41.64	36	2325	8.8	24	2446	6.2	12	2678	3.4	6000	
43.5	34.5	2027	7.3	23	2119	5.1	11.5	2276	2.7	6000	
50.32	29.8	2060	6.4	19.9	2152	4.5	9.9	2309	2.4	6000	
JRP3N...03											
59.06	25.4	2765	7.4	16.9	2879	5.1	8.5	3076	2.7	6000	8
61.28	24.5	2640	6.8	16.3	2982	5.1	8.2	3671	3.1	6000	
70.98	21.1	2457	5.4	14.1	2775	4.1	7	3206	2.4	6000	
83.76	17.9	2900	5.4	11.9	3275	4.1	6	3783	2.4	6000	
89.03	16.8	2591	4.6	11.2	2695	3.2	5.6	2876	1.7	6000	
96.88	15.5	3029	4.9	10.3	3421	3.7	5.2	3803	2.1	6000	
108.8	13.8	3051	4.4	9.2	3320	3.2	4.6	3410	1.6	6000	
124.2	12.1	2447	3.1	8.1	2528	2.1	4	2658	1.1	6000	
146.6	10.2	2888	3.1	6.8	2933	2.1	3.4	3137	1.1	6000	
157.5	9.5	3042	3	6.3	3179	2.1	3.2	3695	1.2	6000	
186.1	8.1	2901	2.4	5.4	3046	1.7	2.7	3292	0.93	6000	
198.9	7.5	2115	1.7	5	2221	1.2	2.5	2401	0.63	6000	
215.3	7	2953	2.2	4.6	3098	1.5	2.3	3343	0.81	6000	
249	6	2648	1.7	4	2780	1.2	2	3006	0.63	6000	
289	5.2	2924	1.6	3.5	3197	1.2	1.7	3489	0.63	6000	
325.7	4.6	3101	1.5	3.1	3244	1	1.5	3492	0.56	6000	
JRP4N...03											
367.7	4.1	3835	1.6	2.7	3888	1.1	1.4	3972	0.57	6000	4
404.7	3.7	2928	1.1	2.5	2966	0.77	1.2	3029	0.39	6000	
460.3	3.3	3674	1.3	2.2	4000	0.91	1.1	4605	0.52	6000	
495.4	3	3874	1.2	2	3925	0.83	1	4008	0.42	6000	
581.3	2.6	3894	1.1	1.7	3944	0.71	0.86	4027	0.36	6000	
643.5	2.3	3907	0.95	1.6	3956	0.64	0.78	4039	0.33	6000	
691.5	2.2	4002	0.91	1.4	4348	0.66	0.72	4494	0.34	6000	
817.1	1.8	4142	0.8	1.2	4424	0.57	0.61	4516	0.29	6000	
879.4	1.7	3945	0.71	1.1	3994	0.48	0.57	4075	0.24	6000	
1017	1.5	3963	0.61	0.98	4011	0.41	0.49	4092	0.21	6000	
1142	1.3	3550	0.49	0.88	3593	0.33	0.44	3666	0.17	6000	
1304	1.2	2886	0.35	0.77	2961	0.24	0.38	3092	0.12	6000	
1430	1	4445	0.49	0.7	4498	0.33	0.35	4589	0.17	6000	
1539	0.97	3406	0.35	0.65	3494	0.24	0.32	3649	0.12	6000	
1806	0.83	3248	0.28	0.55	3304	0.19	0.28	3607	0.11	6000	
1999	0.75	3610	0.28	0.5	3652	0.19	0.25	3969	0.1	6000	
2268	0.66	4502	0.31	0.44	4781	0.22	0.22	5124	0.12	6000	
2502	0.6	4519	0.28	0.4	4572	0.19	0.2	4969	0.1	6000	
2904	0.52	4726	0.26	0.34	5112	0.18	0.17	5767	0.1	6000	
3170	0.47	4042	0.2	0.32	4382	0.15	0.16	5013	0.08	6000	

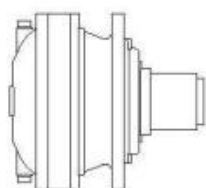




径向力 (输出轴) Radial force (Output shafts)



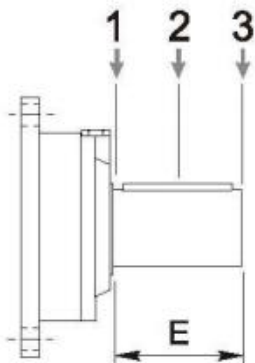
轴向力 (输出轴) Axial force (Output shafts)



$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	35000
$F_{a \text{ max}}$ [N]	60000

径向力 (输入轴) Radial force (Input shafts)



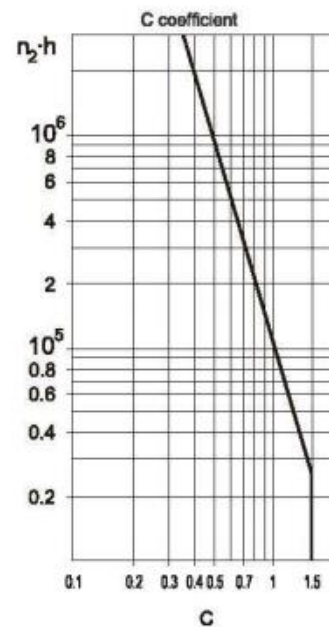
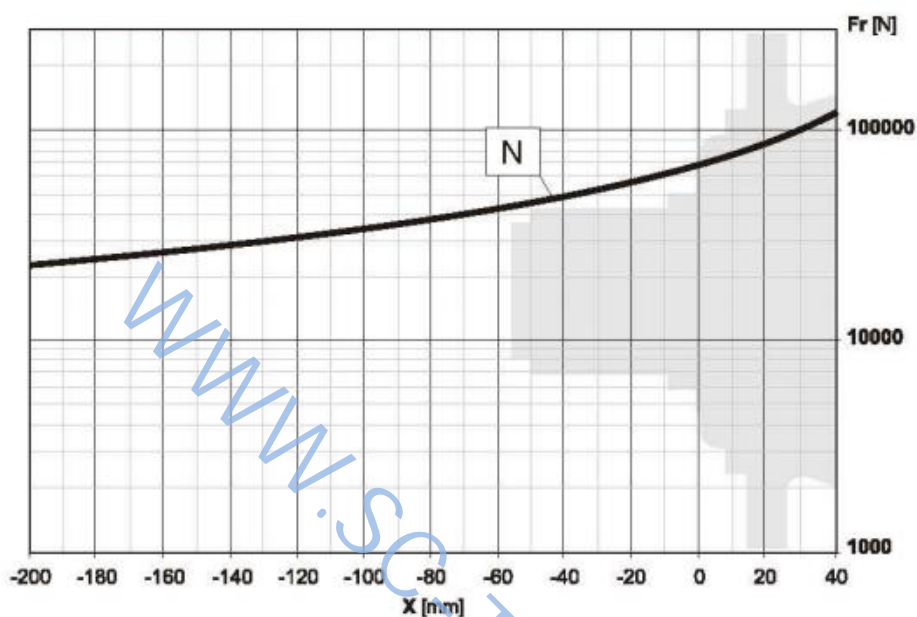
	E	$F_r$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

JRP...1

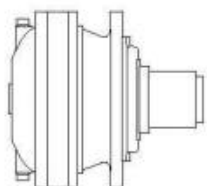
i <sub>ent</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>T</sub> [kW]
	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP2N...1											
15.37	98	1510	15.4	65	1705	11.6	32.5	2100	7.2	5600	12
17.47	86	2121	19.1	57	2395	14.4	28.6	2732	8.2	6000	
20.28	74	2206	17.1	49.3	2314	12	24.7	2494	6.4	6000	
22.7	66	2231	15.4	44.1	2519	11.6	22	2805	6.5	6000	
26.34	57	2276	13.6	38	2383	9.5	19	2560	5.1	6000	
31.02	48.4	2134	10.8	32.2	2342	7.9	16.1	2639	4.5	6000	
36	41.7	2358	10.3	27.8	2463	7.2	13.9	2640	3.8	6000	
41.64	36	2325	8.8	24	2446	6.2	12	2678	3.4	6000	
43.5	34.5	2027	7.3	23	2119	5.1	11.5	2276	2.7	6000	
50.32	29.8	2060	6.4	19.9	2152	4.5	9.9	2309	2.4	6000	
JRP3N...1											
59.06	25.4	2765	7.4	16.9	2879	5.1	8.5	3076	2.7	6000	8
61.28	24.5	2640	6.8	16.3	2982	5.1	8.2	3671	3.1	6000	
70.98	21.1	2457	5.4	14.1	2775	4.1	7	3206	2.4	6000	
83.76	17.9	2900	5.4	11.9	3275	4.1	6	3783	2.4	6000	
89.03	16.8	2591	4.6	11.2	2695	3.2	5.6	2876	1.7	6000	
96.88	15.5	3029	4.9	10.3	3421	3.7	5.2	3803	2.1	6000	
108.8	13.8	3051	4.4	9.2	3320	3.2	4.6	3410	1.6	6000	
124.2	12.1	2447	3.1	8.1	2528	2.1	4	2658	1.1	6000	
146.6	10.2	2888	3.1	6.8	2933	2.1	3.4	3137	1.1	6000	
157.5	9.5	3042	3	6.3	3179	2.1	3.2	3695	1.2	6000	
186.1	8.1	2901	2.4	5.4	3046	1.7	2.7	3292	0.93	6000	
198.9	7.5	2115	1.7	5	2221	1.2	2.5	2401	0.63	6000	
215.3	7	2953	2.2	4.6	3098	1.5	2.3	3343	0.81	6000	
249	6	2648	1.7	4	2780	1.2	2	3006	0.63	6000	
289	5.2	2924	1.6	3.5	3197	1.2	1.7	3489	0.63	6000	
325.7	4.6	3101	1.5	3.1	3244	1	1.5	3492	0.56	6000	
JRP4N...1											
367.7	4.1	3835	1.6	2.7	3888	1.1	1.4	3972	0.57	6000	4
404.7	3.7	2928	1.1	2.5	2966	0.77	1.2	3029	0.39	6000	
460.3	3.3	3674	1.3	2.2	4000	0.91	1.1	4605	0.52	6000	
495.4	3	3874	1.2	2	3925	0.83	1	4008	0.42	6000	
581.3	2.6	3894	1.1	1.7	3944	0.71	0.86	4027	0.36	6000	
643.5	2.3	3907	0.95	1.6	3956	0.64	0.78	4039	0.33	6000	
691.5	2.2	4002	0.91	1.4	4348	0.66	0.72	4494	0.34	6000	
817.1	1.8	4142	0.8	1.2	4424	0.57	0.61	4516	0.29	6000	
879.4	1.7	3945	0.71	1.1	3994	0.48	0.57	4075	0.24	6000	
1017	1.5	3963	0.61	0.98	4011	0.41	0.49	4092	0.21	6000	
1142	1.3	3550	0.49	0.88	3593	0.33	0.44	3666	0.17	6000	
1304	1.2	2886	0.35	0.77	2961	0.24	0.38	3092	0.12	6000	
1430	1	4445	0.49	0.7	4498	0.33	0.35	4589	0.17	6000	
1539	0.97	3406	0.35	0.65	3494	0.24	0.32	3649	0.12	6000	
1806	0.83	3248	0.28	0.55	3304	0.19	0.28	3607	0.11	6000	
1999	0.75	3610	0.28	0.5	3652	0.19	0.25	3969	0.1	6000	
2268	0.66	4502	0.31	0.44	4781	0.22	0.22	5124	0.12	6000	
2502	0.6	4519	0.28	0.4	4572	0.19	0.2	4969	0.1	6000	
2904	0.52	4726	0.26	0.34	5112	0.18	0.17	5767	0.1	6000	
3170	0.47	4042	0.2	0.32	4382	0.15	0.16	5013	0.08	6000	



径向力 (输出轴) Radial force (Output shafts)



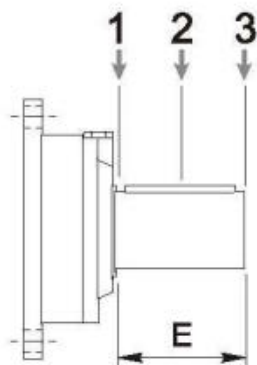
轴向力 (输出轴) Axial force (Output shafts)



$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}[\text{N}]$	45000
$F_{a \text{ max}}[\text{N}]$	80000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r[\text{N}]}$					
		$n_1 \cdot h = 10^3$			$n_1 \cdot h = 10^4$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700





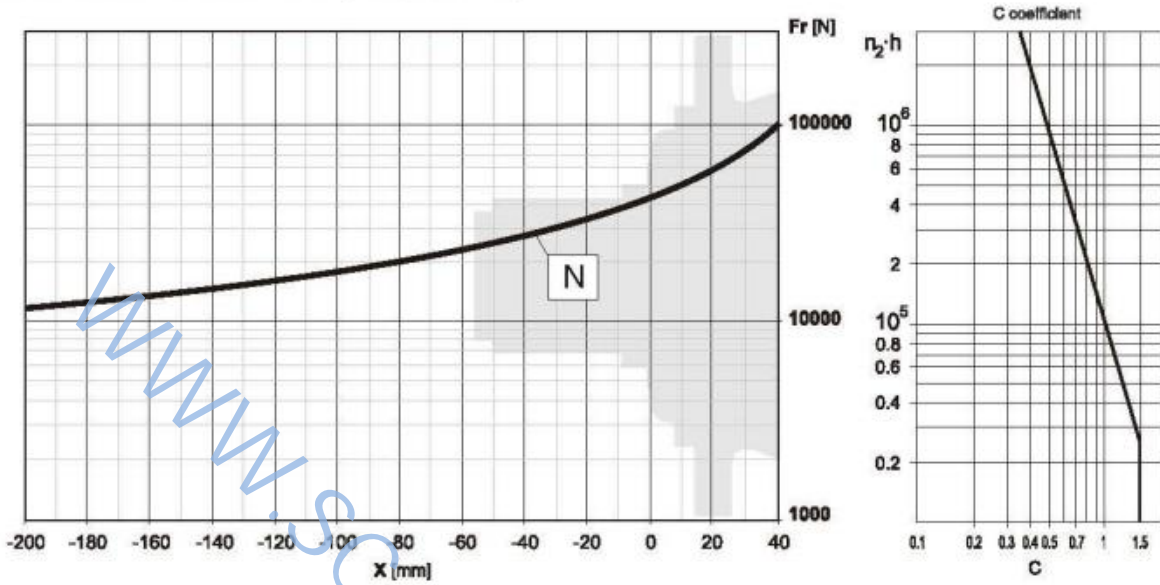
JRP...2

i <sub>eff</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP1N...2											
3.5	429	1565	70	286	1767	53	143	2175	32.6	6000	20
4.13	363	1617	62	242	1827	46.3	121	2249	28.5	6000	
5.17	290	1682	51	193	1900	38.5	97	2339	23.7	6000	
6	250	1732	45.4	167	1956	34.1	83	2173	19	6000	
7.25	207	1582	34.3	138	1695	24.5	69	1868	13.5	6000	
JRP2N...2											
10.78	139	2193	32	93	2476	24.1	46.4	3049	14.8	6000	15
12.25	122	2278	29.2	82	2573	22	40.8	3168	13.5	6000	
14.46	104	2394	26	69	2704	19.6	34.6	3329	12.1	6000	
17.06	88	2475	22.8	59	2795	17.2	29.3	3393	10.4	6000	
18.1	83	2561	22.2	55	2893	16.7	27.6	3562	10.3	6000	
21	71	2678	20	47.6	3025	15.1	23.8	3724	9.3	6000	
25.38	59	2835	17.6	39.4	3202	13.2	19.7	3553	7.3	6000	
29.94	50	2931	15.4	33.4	3310	11.6	16.7	3583	6.3	6000	
31.02	48.4	2582	13.1	32.2	2698	9.1	16.1	2893	4.9	6000	
36	41.7	2358	10.3	27.8	2463	7.2	13.9	2640	3.8	6000	
43.5	34.5	2407	8.7	23	2511	6	11.5	2689	3.2	6000	
52.56	28.5	2070	6.2	19	2161	4.3	9.5	2319	2.3	6000	
JRP3N...2											
53.78	27.9	3552	10.4	18.6	3961	7.7	9.3	4314	4.2	6000	10
63.46	23.6	3732	9.2	15.8	4022	6.6	7.9	4469	3.7	6000	
73.5	20.4	3901	8.3	13.6	4077	5.8	6.8	4609	3.3	6000	
79.44	18.9	3955	7.8	12.6	4106	5.4	6.3	4684	3.1	6000	
92.19	16.3	4010	6.8	10.8	4171	4.7	5.4	4831	2.7	6000	
100.3	15	4042	6.3	10	4250	4.4	5	4915	2.6	6000	
108.6	13.8	4071	5.9	9.2	4323	4.2	4.6	4996	2.4	6000	
125.6	11.9	4125	5.2	8	4459	3.7	4	5146	2.1	6000	
145.7	10.3	4221	4.6	6.9	4601	3.3	3.4	5088	1.8	6000	
152.3	9.9	3846	4	6.6	4014	2.8	3.3	4302	1.5	6000	
176.1	8.5	3907	3.5	5.7	4074	2.4	2.8	4363	1.3	6000	
207.8	7.2	3970	3	4.8	4326	2.2	2.4	4941	1.2	6000	
224.2	6.7	4035	2.8	4.5	4395	2.1	2.2	4798	1.1	6000	
260.2	5.8	4165	2.5	3.8	4532	1.8	1.9	4970	1	6000	
280.7	5.3	3302	1.8	3.6	3605	1.3	1.8	4167	0.78	6000	
314.4	4.8	4334	2.2	3.2	4711	1.6	1.6	5022	0.84	6000	
364.8	4.1	2542	1.1	2.7	2788	0.8	1.4	3244	0.47	6000	
JRP4N...2											
404.7	3.7	5051	2	2.5	5245	1.4	1.2	5615	0.73	6000	6
441	3.4	5312	1.9	2.3	5418	1.3	1.1	5684	0.68	6000	
510.1	2.9	5382	1.7	2	5439	1.1	0.98	5803	0.6	6000	
551.3	2.7	5393	1.5	1.8	5449	1	0.91	5867	0.56	6000	
639.8	2.3	5270	1.3	1.6	5470	0.9	0.78	5992	0.49	6000	
696.2	2.2	5425	1.2	1.4	5495	0.83	0.72	6000	0.45	6000	
773.1	1.9	4524	0.92	1.3	4698	0.64	0.65	5463	0.37	6000	
913.5	1.6	4595	0.79	1.1	4866	0.56	0.55	5662	0.33	6000	
1011	1.5	5477	0.85	0.99	5796	0.6	0.49	6000	0.31	6000	
1140	1.3	5565	0.77	0.88	5895	0.54	0.44	6000	0.28	6000	
1222	1.2	4743	0.61	0.82	5190	0.45	0.41	6021	0.26	6000	
1442	1	5337	0.58	0.69	5652	0.41	0.35	6226	0.23	6000	
1599	0.94	5036	0.5	0.63	5502	0.36	0.31	6366	0.21	6000	
1849	0.81	5200	0.44	0.54	5676	0.32	0.27	6559	0.19	6000	
1995	0.75	4415	0.35	0.5	4530	0.24	0.25	4730	0.12	6000	
2315	0.65	5124	0.35	0.43	5257	0.24	0.22	5489	0.12	6000	
2623	0.57	4633	0.28	0.38	5013	0.2	0.19	5720	0.11	6000	
2798	0.54	5687	0.32	0.36	6000	0.23	0.18	6000	0.11	6000	
3301	0.45	5997	0.29	0.3	6000	0.19	0.15	6000	0.09	6000	

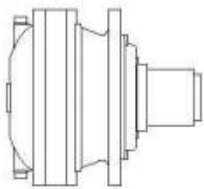


JRP 系列行星齿轮箱  
Series Planetary Gear Units

径向力 (输出轴) Radial force (Output shafts)

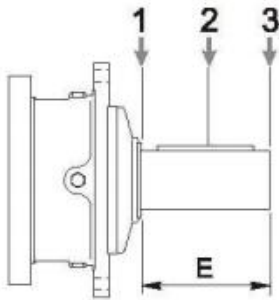


轴向力 (输出轴) Axial force (Output shafts)

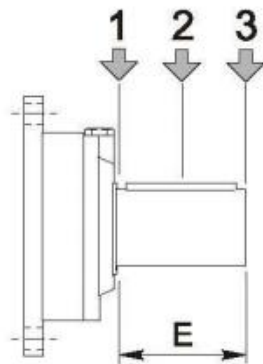


	法兰安装/Flange-mounted
$F_{a\ din}$ [N]	35000
$F_{a\ max}$ [N]	60000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r(n)}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	104000	8800	6400	7000	4400	3200



	E	$F_{r(n)}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

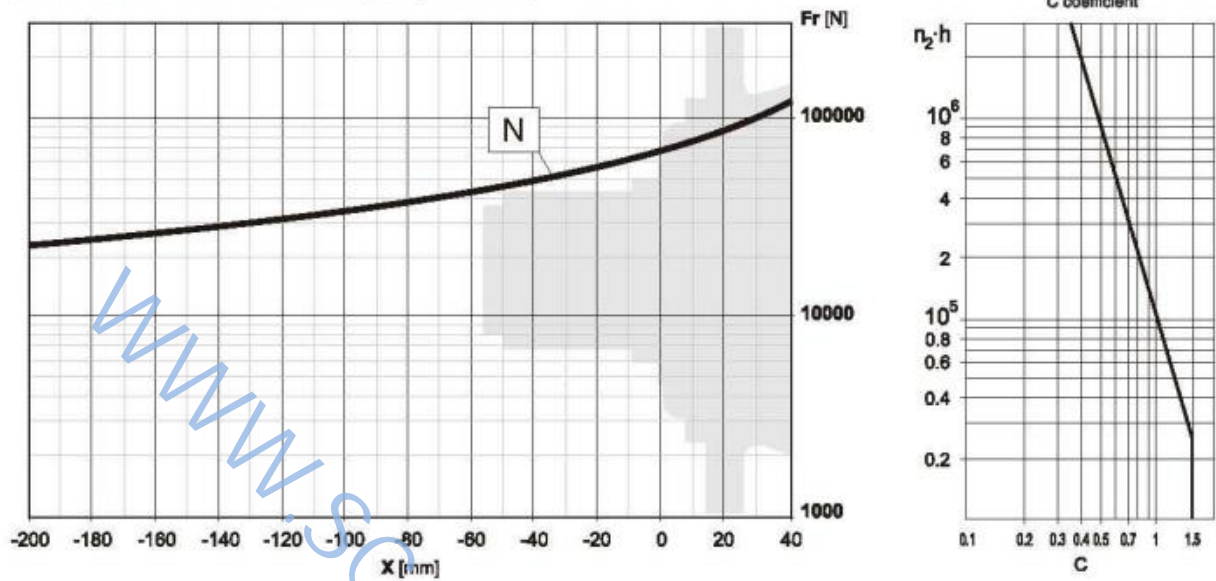


JRP...3

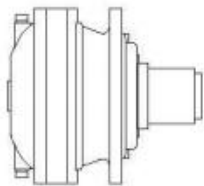
i <sub>tot</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>T</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]		
JRP1N...3											
3.5	429	1565	70	286	1767	53	143	2175	32.6	6000	20
4.13	363	1617	62	242	1827	46.3	121	2249	28.5	6000	
5.17	290	1682	51	193	1900	38.5	97	2339	23.7	6000	
6	250	1732	45.4	167	1956	34.1	83	2173	19	6000	
7.25	207	1582	34.3	138	1695	24.5	69	1868	13.5	6000	
JRP2N...3											
10.78	139	2193	32	93	2476	24.1	46.4	3049	14.8	6000	15
12.25	122	2278	29.2	82	2573	22	40.8	3168	13.5	6000	
14.46	104	2394	26	69	2704	19.6	34.6	3329	12.1	6000	
17.06	88	2475	22.8	59	2795	17.2	29.3	3393	10.4	6000	
18.1	83	2561	22.2	55	2893	16.7	27.6	3562	10.3	6000	
21	71	2678	20	47.6	3025	15.1	23.8	3724	9.3	6000	
25.38	59	2835	17.6	39.4	3202	13.2	19.7	3553	7.3	6000	
29.94	50	2931	15.4	33.4	3310	11.6	16.7	3583	6.3	6000	
31.02	48.4	2582	13.1	32.2	2698	9.1	16.1	2893	4.9	6000	
36	41.7	2358	10.3	27.8	2463	7.2	13.9	2640	3.8	6000	
43.5	34.5	2407	8.7	23	2511	6	11.5	2689	3.2	6000	
52.56	28.5	2070	6.2	19	2161	4.3	9.5	2319	2.3	6000	
JRP3N...3											
53.78	27.9	3552	10.4	18.6	3961	7.7	9.3	4314	4.2	6000	10
63.46	23.6	3732	9.2	15.8	4022	6.6	7.9	4469	3.7	6000	
73.5	20.4	3901	8.3	13.6	4077	5.8	6.8	4609	3.3	6000	
79.44	18.9	3955	7.8	12.6	4106	5.4	6.3	4684	3.1	6000	
92.19	16.3	4010	6.8	10.8	4171	4.7	5.4	4831	2.7	6000	
100.3	15	4042	6.3	10	4250	4.4	5	4915	2.6	6000	
108.6	13.8	4071	5.9	9.2	4323	4.2	4.6	4996	2.4	6000	
125.6	11.9	4125	5.2	8	4459	3.7	4	5146	2.1	6000	
145.7	10.3	4221	4.6	6.9	4601	3.3	3.4	5088	1.8	6000	
152.3	9.9	3846	4	6.6	4014	2.8	3.3	4302	1.5	6000	
176.1	8.5	3907	3.5	5.7	4074	2.4	2.8	4363	1.3	6000	
207.8	7.2	3970	3	4.8	4326	2.2	2.4	4941	1.2	6000	
224.2	6.7	4035	2.8	4.5	4395	2.1	2.2	4798	1.1	6000	
260.2	5.8	4165	2.5	3.8	4532	1.8	1.9	4970	1	6000	
280.7	5.3	3302	1.8	3.6	3605	1.3	1.8	4167	0.78	6000	
314.4	4.8	4334	2.2	3.2	4711	1.6	1.6	5022	0.84	6000	
364.8	4.1	2542	1.1	2.7	2788	0.8	1.4	3244	0.47	6000	
JRP4N...3											
404.7	3.7	5051	2	2.5	5245	1.4	1.2	5615	0.71	6000	6
441	3.4	5312	1.9	2.3	5418	1.3	1.1	5684	0.68	6000	
510.1	2.9	5382	1.7	2	5439	1.1	0.98	5803	0.6	6000	
551.3	2.7	5393	1.5	1.8	5449	1	0.91	5867	0.56	6000	
639.8	2.3	5270	1.3	1.6	5470	0.9	0.78	5992	0.49	6000	
696.2	2.2	5425	1.2	1.4	5495	0.83	0.72	6000	0.45	6000	
773.1	1.9	4524	0.92	1.3	4698	0.64	0.65	5463	0.37	6000	
913.5	1.6	4595	0.79	1.1	4866	0.56	0.55	5662	0.33	6000	
1011	1.5	5477	0.85	0.99	5796	0.6	0.49	6000	0.31	6000	
1140	1.3	5565	0.77	0.88	5895	0.54	0.44	6000	0.28	6000	
1222	1.2	4743	0.61	0.82	5190	0.45	0.41	6021	0.26	6000	
1442	1	5337	0.58	0.69	5652	0.41	0.35	6226	0.23	6000	
1599	0.94	5036	0.5	0.63	5502	0.36	0.31	6366	0.21	6000	
1849	0.81	5200	0.44	0.54	5676	0.32	0.27	6559	0.19	6000	
1995	0.75	4415	0.35	0.5	4530	0.24	0.25	4730	0.12	6000	
2315	0.65	5124	0.35	0.43	5257	0.24	0.22	5489	0.12	6000	
2623	0.57	4633	0.28	0.38	5013	0.2	0.19	5720	0.11	6000	
2798	0.54	5687	0.32	0.36	6000	0.23	0.18	6000	0.11	6000	
3301	0.45	5997	0.29	0.3	6000	0.19	0.15	6000	0.09	6000	



径向力 (输出轴) Radial force (Output shafts)



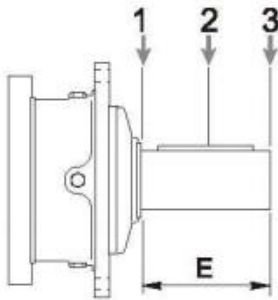
轴向力 (输出轴) Axial force (Output shafts)



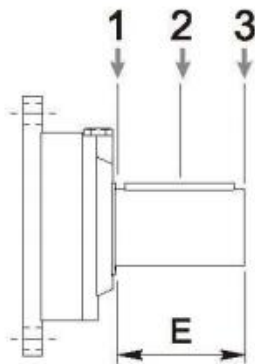
$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	45000
$F_{a \text{ max}}$ [N]	80000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r [N]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	104000	8800	6400	7000	4400	3200



	E	$F_{r [N]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

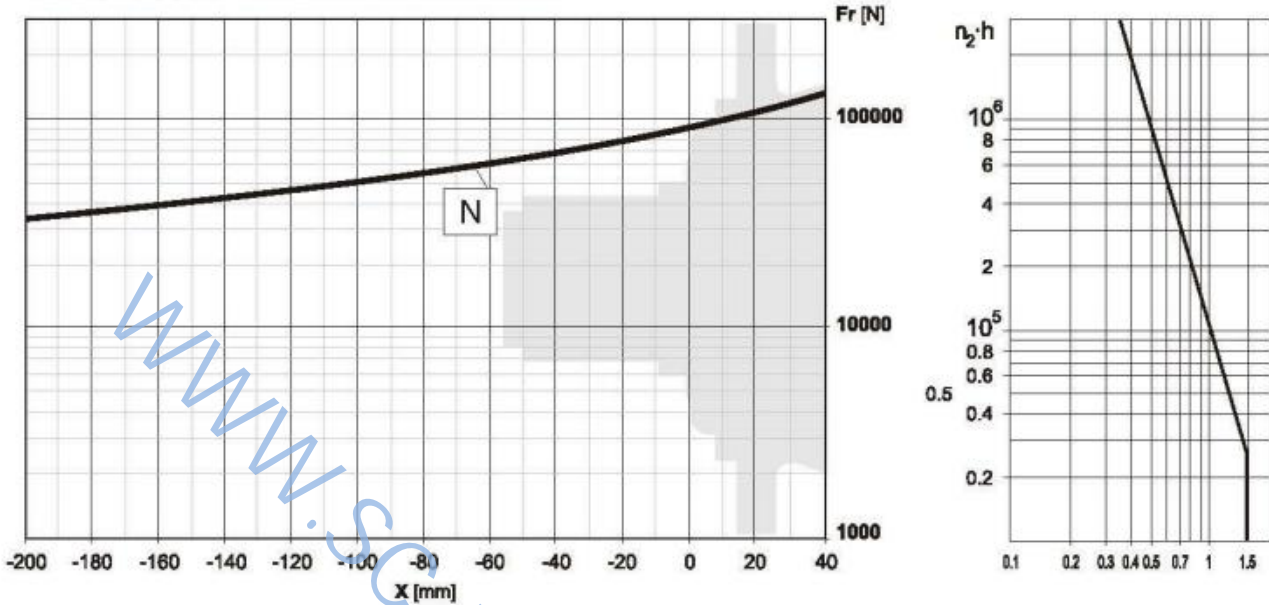


JRP...4

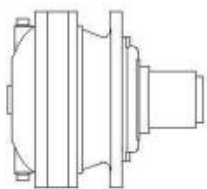
i <sub>en</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP1N...4											
3.5	429	2241	101	286	2531	76	143	3116	46.6	10000	30
3.86	389	2307	94	259	2605	71	130	3207	43.5	10000	
4.33	346	2346	85	231	2650	64	115	3262	39.5	10000	
5	300	2401	75	200	2712	57	100	3338	35	10000	
6	250	2502	66	167	2826	49.3	83	3480	30.4	10000	
JRP2N...4											
10.78	139	3110	45.3	93	3512	34.1	46.4	4324	21	9800	18
12.25	122	3264	41.9	82	3686	31.5	40.8	4538	19.4	9800	
13.51	111	3359	39.1	74	3794	29.4	37	4671	18.1	10000	
15.16	99	3417	35.4	66	3859	26.7	33	4751	16.4	10000	
17.88	84	3590	31.5	56	4055	23.8	28	4992	14.6	10000	
20.65	73	3674	28	48.4	4150	21	24.2	5109	13	10000	
22.39	67	3641	27	44.7	4338	20.3	22.3	5340	12.5	10000	
25.98	58	4016	24.3	38.5	4536	18.3	19.2	5140	10.4	10000	
27.99	54	3334	18.7	35.7	3567	13.3	17.9	3918	7.3	10000	
30	50	4110	21.5	33.3	4642	16.2	16.7	5479	9.6	10000	
36.25	41.4	4319	18.7	27.6	4620	13.3	13.8	5075	7.3	10000	
43.5	34.5	3971	14.3	23	4137	10	11.5	4422	5.3	10000	
JRP3N...4											
51.22	29.3	4924	15.1	19.5	5561	11.4	9.8	6150	6.3	10000	14
53.78	27.9	5087	14.9	18.6	5745	11.2	9.3	7073	6.9	10000	
60.44	24.8	5174	13.4	16.5	5344	10.1	8.3	6246	5.4	10000	
73.5	20.4	5058	10.8	13.6	5549	7.9	6.8	6254	4.5	10000	
78.51	19.1	5597	11.2	12.7	6005	8	6.4	6603	4.4	10000	
90.93	16.5	5849	10.1	11	6085	7	5.5	6810	3.9	10000	
98.27	15.3	5841	9.3	10.2	6112	6.5	5.1	6560	3.5	10000	
110.6	13.6	6079	8.6	9	6361	6	4.5	7297	3.5	10000	
123.9	12.1	5642	7.2	8.1	5851	4.9	4	6651	2.8	10000	
134.3	11.2	6051	7.1	7.4	6315	4.9	3.7	6760	2.6	10000	
155.1	9.7	5757	5.8	6.4	6024	4.1	3.2	6968	2.4	10000	
180	8.3	5834	5.1	5.6	6219	3.6	2.8	7170	2.1	10000	
208.2	7.2	5910	4.5	4.8	6413	3.2	2.4	7269	1.8	10000	
217.5	6.9	5495	4	4.6	5735	2.8	2.3	6146	1.5	10000	
251.6	6	5581	3.5	4	5821	2.4	2	6233	1.3	10000	
272.8	5.5	5375	3.1	3.7	5552	2.1	1.8	5838	1.1	10000	
JRP4N...4											
322.7	4.6	7604	3.7	3.1	7906	2.6	1.5	9121	1.5	10000	8
373.2	4	7704	3.2	2.7	8152	2.3	1.3	9392	1.3	10000	
411.6	3.6	7683	2.9	2.4	8332	2.1	1.2	9537	1.2	10000	
441	3.4	6873	2.4	2.3	7218	1.7	1.1	7800	0.93	10000	
510.1	2.9	6998	2.2	2	7341	1.5	0.98	7923	0.81	10000	
555.3	2.7	7619	2.2	1.8	7992	1.5	0.9	8626	0.81	10000	
631.1	2.4	8077	2	1.6	8750	1.5	0.79	9802	0.81	10000	
696.2	2.2	7397	1.7	1.4	7774	1.2	0.72	8406	0.63	10000	
771.8	1.9	7348	1.5	1.3	7688	1	0.65	8274	0.56	10000	
892.7	1.7	6595	1.2	1.1	6907	0.81	0.56	7448	0.44	10000	
994.6	1.5	8119	1.3	1	8789	0.93	0.5	10000	0.52	10000	
1104	1.4	8159	1.2	0.91	8545	0.81	0.45	9215	0.44	10000	
1303	1.2	9309	1.1	0.77	10000	0.81	0.38	10000	0.4	10000	
1445	1	7916	0.86	0.69	8637	0.63	0.35	9973	0.36	10000	
1631	0.92	8185	0.79	0.61	8905	0.57	0.31	10000	0.32	10000	
1884	0.8	9194	0.77	0.53	9932	0.55	0.27	10000	0.26	10000	
2095	0.72	7243	0.54	0.48	7839	0.39	0.24	8946	0.22	10000	
2186	0.69	8653	0.62	0.46	9419	0.45	0.23	10000	0.24	10000	
2468	0.61	5462	0.35	0.41	5604	0.24	0.2	5852	0.12	10000	
2850	0.53	6307	0.35	0.35	6471	0.24	0.18	6757	0.12	10000	
3170	0.47	7852	0.39	0.32	8486	0.28	0.16	9665	0.16	10000	



径向力 (输出轴) Radial force (Output shafts)

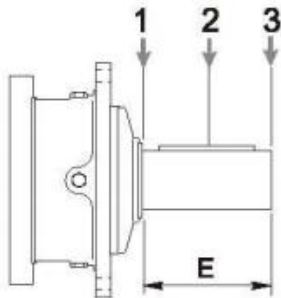


轴向力 (输出轴) Axial force (Output shafts)

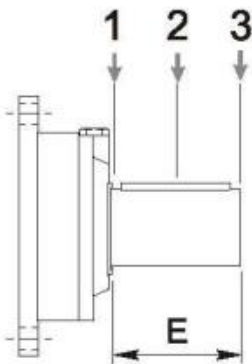


	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	50000
$F_{a \text{ max}}$ [N]	90000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r[m]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200
ADM3	130	23800	15500	9600	11900	7800	4800



	E	$F_{r[m]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700



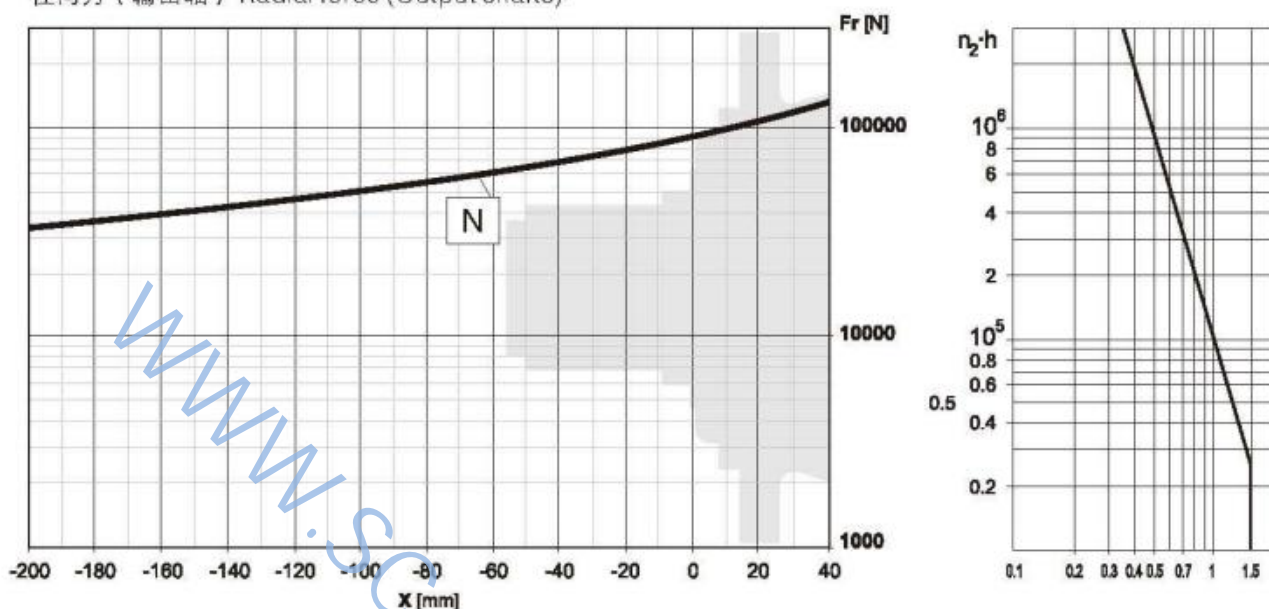
JRP...5

ieff	1500			1000			500			T2max [Nm]	PT [kW]
	n2 [rpm]	T2 [Nm]	P2 [kW]	n2 [rpm]	T2 [Nm]	P2 [kW]	n2 [rpm]	T2 [Nm]	P2 [kW]		
JRP2N...5											
12.25	122	3264	41.9	82	3686	31.5	40.8	4538	19.4	9800	18
14.46	104	3430	37.3	69	3874	28.1	34.6	4769	17.3	9800	
15.16	99	3417	35.4	66	3859	26.7	33	4751	16.4	10000	
18.1	83	3669	31.9	55	4144	24	27.6	5102	14.8	10000	
21	71	3837	28.7	47.6	4333	21.6	23.8	5335	13.3	10000	
22.39	67	3841	27	44.7	4338	20.3	22.3	5340	12.5	10000	
25.38	59	4061	25.1	39.4	4586	18.9	19.7	5646	11.7	10000	
27.99	54	4179	23.5	35.7	4720	17.7	17.9	5811	10.9	10000	
31.39	47.8	4251	21.3	31.9	4801	16	15.9	5885	9.8	10000	
36.25	41.4	4350	18.9	27.6	4913	14.2	13.8	5575	8.1	10000	
43.5	34.5	3971	14.3	23	4137	10	11.5	4422	5.3	10000	
JRP3N...5											
50.59	29.6	4995	15.5	19.8	5641	11.7	9.9	6945	7.2	10000	14
55.8	26.9	5141	14.5	17.9	5806	10.9	9	6373	6	10000	
63.33	23.7	5343	13.3	15.8	6034	10	7.9	7366	6.1	10000	
73.5	20.4	5587	11.9	13.6	6310	9	6.8	7597	5.4	10000	
78.35	19.1	5593	11.2	12.8	6004	8	6.4	6600	4.4	10000	
88.81	16.9	5914	10.5	11.3	6678	7.9	5.6	7898	4.7	10000	
104.8	14.3	6215	9.3	9.5	7018	7	4.8	8169	4.1	10000	
108.6	13.8	5968	8.6	9.2	6188	6	4.6	7082	3.4	10000	
126	11.9	6568	8.2	7.9	7358	6.1	4	8478	3.5	10000	
144.7	10.4	6227	6.8	6.9	6734	4.9	3.5	7736	2.8	10000	
152.3	9.8	6180	6.4	6.6	6649	4.6	3.3	7668	2.6	10000	
184	8.2	6297	5.4	5.4	6860	3.9	2.7	7901	2.2	10000	
202.9	7.4	6639	5.1	4.9	7224	3.7	2.5	8308	2.1	10000	
227.6	6.6	6556	4.5	4.4	7134	3.3	2.2	8205	1.9	10000	
262.8	5.7	6183	3.7	3.8	6733	2.7	1.9	7753	1.5	10000	
315.4	4.8	4894	2.4	3.2	5343	1.8	1.6	6175	1	10000	

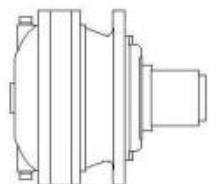




径向力 (输出轴) Radial force (Output shafts)



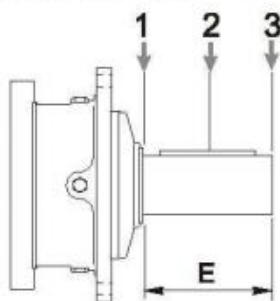
轴向力 (输出轴) Axial force (Output shafts)



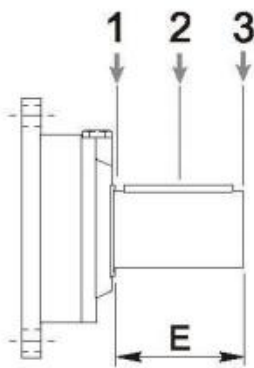
$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	50000
$F_{a \text{ max}}$ [N]	90000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_r$ [N]					
		$n_1 \cdot h = 107$			$n_1 \cdot h = 108$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200
ADM3	130	23800	15500	9600	11900	7800	4800



	E	$F_r$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700



JRP 行星齿轮箱 Planetary Gear Units

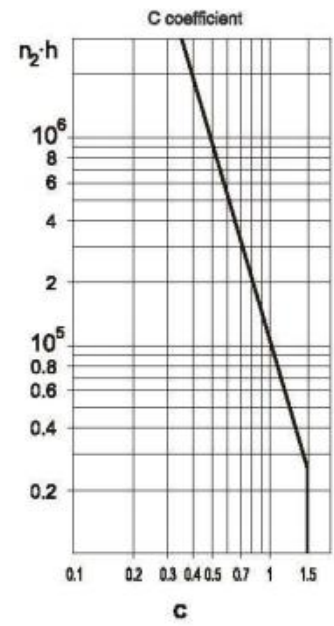
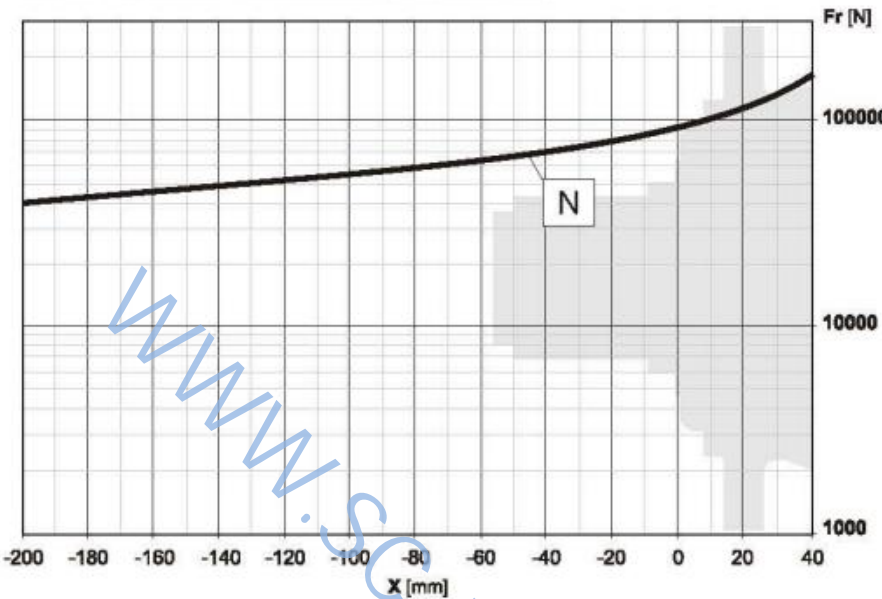
JRP...6

i <sub>en</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]	n <sub>2</sub> [rpm]	T <sub>2</sub> [Nm]	P <sub>2</sub> [kW]		
JRP1N...6											
4.08	368	2936	113	245	3316	85	123	4082	52	15000	40
5.05	297	3054	95	198	3449	72	99	4246	44	15000	
5.81	258	3122	84	172	3526	64	86	4341	39.1	15000	
6.92	217	3246	74	145	3666	55	72	4514	34.2	15000	
8.7	172	2868	52	115	3077	37	57	3396	20.4	15000	
JRP2N...6											
14.28	105	4276	47	70	4829	35.4	35	5945	21.8	15000	23
16.85	89	4493	41.9	59	5075	31.5	29.7	6248	19.4	15000	
17.68	85	4447	39.5	57	5022	29.8	28.3	6184	18.3	15000	
21.09	71	4807	35.8	47.4	5428	27	23.7	6683	16.6	15000	
24.48	61	5026	32.3	40.8	5676	24.3	20.4	6989	14.9	15000	
29.58	51	5320	28.3	33.8	6008	21.3	16.9	7397	13.1	15000	
30.3	49.5	5228	27.1	33	5904	20.4	16.5	7269	12.6	15000	
36.61	41	5533	23.7	27.3	6249	17.9	13.7	7693	11	15000	
41.52	36.1	4902	18.5	24.1	5107	12.9	12	5456	6.9	15000	
44.98	33.3	3629	12.7	22.2	3800	8.8	11.1	4092	4.8	15000	
50.17	29.9	4998	15.7	19.9	5202	10.9	10	5552	5.8	15000	
JRP3N...6											
58.98	25.4	6543	17.4	17	7390	13.1	8.5	9098	8.1	15000	15
61.86	24.2	6476	16.4	16.2	7314	12.4	8.1	8304	7	15000	
73.83	20.3	7000	14.9	13.5	7905	11.2	6.8	9732	6.9	15000	
75.4	19.9	7044	14.7	13.3	7955	11.1	6.6	9794	6.8	15000	
87.12	17.2	7356	13.3	11.5	8308	10	5.7	10228	6.1	15000	
101.1	14.8	7892	12	9.9	8687	9	4.9	10384	5.4	15000	
109.1	13.8	7869	11.3	9.2	8887	8.5	4.6	10941	5.3	15000	
126.6	11.9	8228	10.2	7.9	9293	7.7	4	11441	4.7	15000	
146.9	10.2	8604	9.2	6.8	9717	6.9	3.4	10774	3.8	15000	
152.9	9.8	8709	8.9	6.5	9835	6.7	3.3	12023	4.1	15000	
177.5	8.5	9107	8.1	5.6	10248	6	2.8	10973	3.2	15000	
209.2	7.2	7381	5.5	4.8	7820	3.9	2.4	8994	2.3	15000	
219.7	6.8	8429	6	4.6	9159	4.4	2.3	10512	2.5	15000	
252.7	5.9	7502	4.7	4	8129	3.4	2	9337	1.9	15000	
265.4	5.7	8765	5.2	3.8	9515	3.8	1.9	10906	2.2	15000	
305.4	4.9	7776	4	3.3	8446	2.9	1.6	9689	1.7	15000	
363.7	4.1	6105	2.6	2.7	6649	1.9	1.4	7657	1.1	15000	
JRP4N...6											
409.3	3.7	11701	4.5	2.4	12828	3.3	1.2	13665	1.7	15000	11
443	3.4	11982	4.2	2.3	12979	3.1	1.1	13813	1.6	15000	
512.4	2.9	12392	3.8	2	13025	2.7	0.98	14090	1.4	15000	
555.6	2.7	12244	3.5	1.8	12716	2.4	0.9	14246	1.3	15000	
654.3	2.3	12434	3	1.5	13023	2.1	0.76	14565	1.2	15000	
718.5	2.1	13004	2.8	1.4	13423	2	0.7	14750	1.1	15000	
779.1	1.9	11377	2.3	1.3	11906	1.6	0.64	13853	0.93	15000	
878.3	1.7	12778	2.3	1.1	13797	1.6	0.57	15000	0.9	15000	
1019	1.5	11665	1.8	0.98	12638	1.3	0.49	14664	0.75	15000	
1145	1.3	13474	1.8	0.87	14304	1.3	0.44	15000	0.69	15000	
1232	1.2	12047	1.5	0.81	13170	1.1	0.41	15000	0.64	15000	
1329	1.1	13813	1.6	0.75	14595	1.2	0.38	15000	0.6	15000	
1606	0.93	14174	1.4	0.62	14973	0.98	0.31	15000	0.49	15000	
1864	0.8	13195	1.1	0.54	14389	0.81	0.27	15000	0.42	15000	
1988	0.75	12975	1	0.5	13987	0.74	0.25	15000	0.39	15000	
2307	0.65	13340	0.91	0.43	14375	0.65	0.22	15000	0.35	15000	
2524	0.59	9025	0.56	0.4	9751	0.41	0.2	11100	0.23	15000	
2787	0.54	13815	0.78	0.36	14880	0.56	0.18	15000	0.28	15000	
3207	0.47	12288	0.6	0.31	13240	0.43	0.16	15000	0.25	15000	

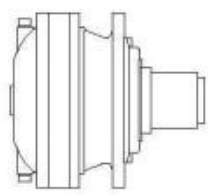


JRP 系列行星齿轮箱  
Series Planetary Gear Units

径向力 (输出轴) Radial force (Output shafts)



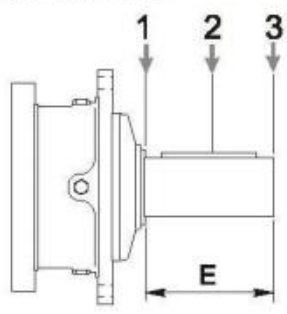
轴向力 (输出轴) Axial force (Output shafts)



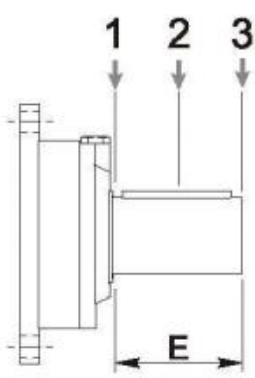
$F_{a \text{ din}}$   
 $F_{a \text{ max}}$

	法兰安装/Flange-mounted
$F_{a \text{ din}}$ [N]	48000
$F_{a \text{ max}}$ [N]	60000

径向力 (输入轴) Radial force (Input shafts)



	E	$F_{r1}$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200
ADM3	130	23800	15500	9600	11900	7800	4800



	E	$F_{r1}$ [N]					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700



JRP 行星齿轮箱 Planetary Gear Units

JRP...7

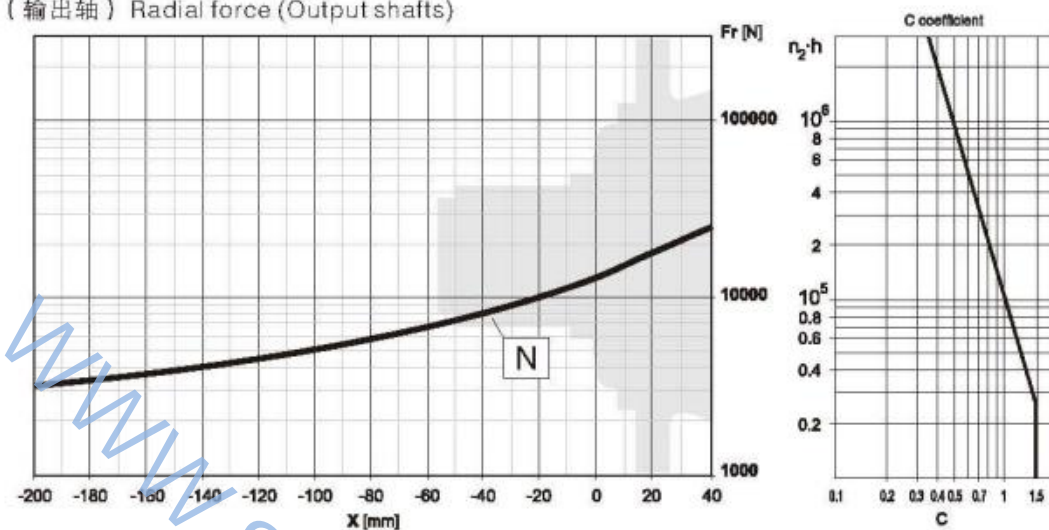
i <sub>en</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>r</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]		
JRP1N...7											
3.9	385	4758	192	256	5374	144	128	6616	89	20000	40
5.14	292	5006	153	195	5654	115	97	6961	71	20000	
6.27	239	5178	130	159	5847	98	80	7199	60	20000	
JRP2N...7											
13.65	110	6103	70	73	6893	53	36.6	8486	32.6	20000	23
16.11	93	6309	62	62	7125	46.3	31	8772	28.5	20000	
17.99	83	7290	64	56	8233	47.9	27.8	9317	27.1	20000	
20.16	74	6563	51	50	7412	38.5	24.8	9125	23.7	20000	
21.95	68	7540	54	45.6	8220	39.2	22.8	8771	20.9	20000	
26.57	56	8195	48.4	37.6	9057	35.7	18.8	9649	19	20000	
28.28	53	6170	34.3	35.4	6613	24.5	17.7	7286	13.5	20000	
30.84	48.6	8570	43.7	32.4	9185	31.2	16.2	9776	16.6	20000	
37.27	40.3	8132	34.3	26.8	8716	24.5	13.4	9603	13.5	20000	
45.46	33	8477	29.3	22	8799	20.3	11	9353	10.8	20000	
JRP3N...7											
47.78	31.4	8888	29.2	20.9	10037	22	10.5	12357	13.5	20000	15
56.37	26.6	9340	26	17.7	10548	19.6	8.9	12986	12.1	20000	
62.96	23.8	9448	23.6	15.9	9794	16.3	7.9	10392	8.6	20000	
70.57	21.3	9991	22.2	14.2	11283	16.7	7.1	13892	10.3	20000	
81.9	18.3	10447	20	12.2	11799	15.1	6.1	14526	9.3	20000	
93.01	16.1	9781	16.5	10.8	10129	11.4	5.4	11021	6.2	20000	
98.96	15.2	11058	17.6	10.1	12488	13.2	5.1	13856	7.3	20000	
107.9	13.9	9908	14.4	9.3	10258	10	4.6	11354	5.5	20000	
127.4	11.8	10050	12.4	7.9	10402	8.6	3.9	11733	4.8	20000	
137.4	10.9	10115	11.6	7.3	10468	8	3.6	11910	4.5	20000	
159.4	9.4	10244	10.1	6.3	10684	7	3.1	12263	4	20000	
185	8.1	10374	8.8	5.4	11010	6.2	2.7	12623	3.6	20000	
192.7	7.8	10409	8.5	5.2	11099	6	2.6	12722	3.5	20000	
223.6	6.7	10539	7.4	4.5	11434	5.4	2.2	13093	3.1	20000	
235	6.4	9797	6.5	4.3	10399	4.6	2.1	11934	2.7	20000	
270.2	5.6	10643	6.2	3.7	11112	4.3	1.9	11921	2.3	20000	
329.6	4.6	10258	4.9	3	11128	3.5	1.5	12743	2	20000	
JRP4N...7											
359.5	4.2	15642	6.8	2.8	16279	4.7	1.4	18842	2.7	20000	11
391.2	3.8	15764	6.3	2.6	16578	4.4	1.3	19172	2.6	20000	
461.7	3.2	14336	4.9	2.2	14970	3.4	1.1	17336	2	20000	
491.4	3.1	16094	5.1	2	17403	3.7	1	19575	2.1	20000	
568.4	2.6	16464	4.6	1.8	17944	3.3	0.88	19845	1.8	20000	
645.5	2.3	12997	3.2	1.5	14044	2.3	0.77	15988	1.3	20000	
700.7	2.1	15008	3.4	1.4	16365	2.4	0.71	18879	1.4	20000	
810.4	1.9	15486	3	1.2	16872	2.2	0.62	19271	1.2	20000	
883.9	1.7	13803	2.5	1.1	14900	1.8	0.57	16938	1	20000	
1039	1.4	15905	2.4	0.96	16561	1.7	0.48	17700	0.89	20000	
1110	1.4	14412	2	0.9	15418	1.5	0.45	17656	0.83	20000	
1226	1.2	16903	2.2	0.82	18375	1.6	0.41	19586	0.84	20000	
1342	1.1	14755	1.7	0.75	16075	1.3	0.37	18272	0.71	20000	
1552	0.97	15177	1.5	0.64	16539	1.1	0.32	18757	0.63	20000	
1875	0.8	13067	1.1	0.53	14330	0.8	0.27	16674	0.47	20000	
2023	0.74	16117	1.3	0.49	17360	0.9	0.25	19669	0.51	20000	
2348	0.64	16565	1.1	0.43	17836	0.8	0.21	20000	0.44	20000	
2468	0.61	15148	0.96	0.41	16325	0.69	0.2	18512	0.39	20000	
2837	0.53	14358	0.8	0.35	15701	0.58	0.18	18194	0.34	20000	
3460	0.43	16125	0.73	0.29	17364	0.53	0.14	19665	0.3	20000	



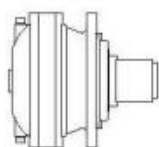
JRP 系列行星齿轮箱  
Series Planetary Gear Units



径向力 (输出轴) Radial force (Output shafts)



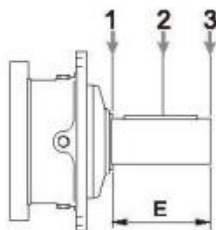
轴向力 (输出轴) Axial force (Output shafts)



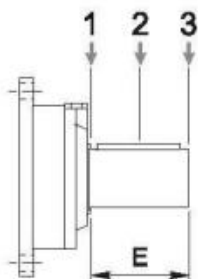
Fa din  
Fa max

	法兰安装/Flange-mounted
Fa din [N]	68000
Fa max [N]	68000

径向力 (输入轴) Radial force (Input shafts)



	E	Fr [N]					
		n <sub>1</sub> · n = 10 <sup>7</sup>			n <sub>1</sub> · h = 10 <sup>8</sup>		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200
ADM3	130	23800	15500	9600	11900	7800	4800



	E	Fr [N]					
		n <sub>1</sub> · h = 10 <sup>7</sup>			n <sub>1</sub> · h = 10 <sup>8</sup>		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

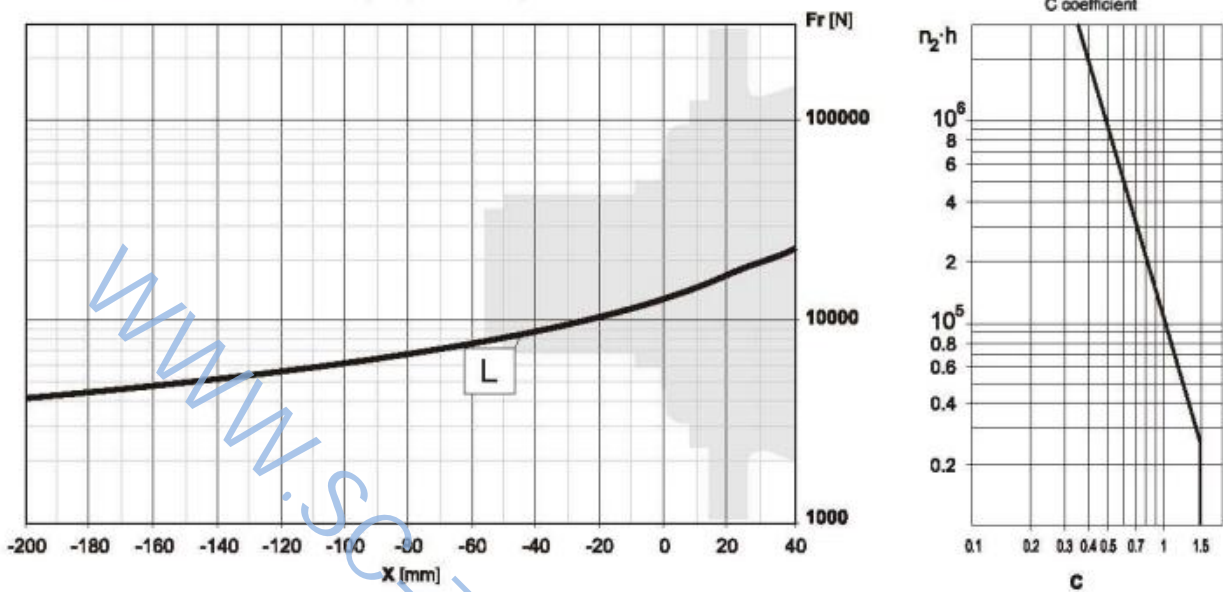
JRP...8

i <sub>en</sub>	1500			1000			500			T <sub>2max</sub> [Nm]	P <sub>T</sub> [kW]
	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]	n <sub>z</sub> [rpm]	T <sub>z</sub> [Nm]	P <sub>z</sub> [kW]		
JRP2N...8											
19.5	77	7712	62	51	8709	46.8	25.6	10722	28.8	20000	23
23.4	64	8145	55	42.7	9199	41.2	21.4	11325	25.3	20000	
JRP3N...8											
47.78	31.4	10090	33.2	20.9	11395	25	10.5	13411	14.7	20000	15
56.37	26.6	10604	29.5	17.7	11976	22.2	8.9	13721	12.7	20000	
62.17	24.1	10920	27.6	16.1	12333	20.8	8	13992	11.8	20000	
70.57	21.3	11343	25.3	14.2	12810	19	7.1	14349	10.6	20000	
80.54	18.6	11802	23	12.4	13221	17.2	6.2	14727	9.6	20000	
87.31	17.2	12091	21.8	11.5	13310	16	5.7	14962	9	20000	
100.8	14.9	12624	19.7	9.9	13471	14	5	15388	8	20000	
109.1	13.7	12925	18.6	9.2	13631	13.1	4.6	15627	7.5	20000	
122.4	12.3	13236	17	8.2	13949	11.9	4.1	15978	6.8	20000	
141.4	10.6	13396	14.9	7.1	14353	10.6	3.5	16425	6.1	20000	
161.4	9.3	10255	10	6.2	10710	7	3.1	12291	4	20000	
169.7	8.8	13729	12.7	5.9	14878	9.2	2.9	17006	5.3	20000	
185	8.1	10374	8.8	5.4	11010	6.2	2.7	12623	3.6	20000	
196.8	7.6	9651	7.7	5.1	10030	5.3	2.5	11526	3.1	20000	
223.6	6.7	10539	7.4	4.5	11434	5.4	2.2	13093	3.1	20000	
272.7	5.5	9920	5.7	3.7	10715	4.1	1.8	12286	2.4	20000	

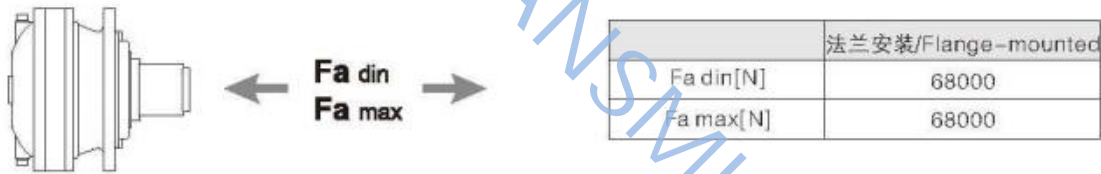




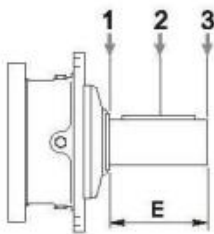
径向力 (输出轴) Radial force (output shafts)



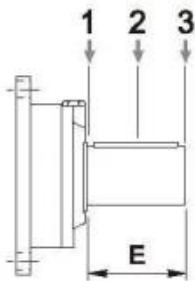
轴向力 (输出轴) Axial force (output shaft)



径向力 (输入轴) Radial force (input shafts)



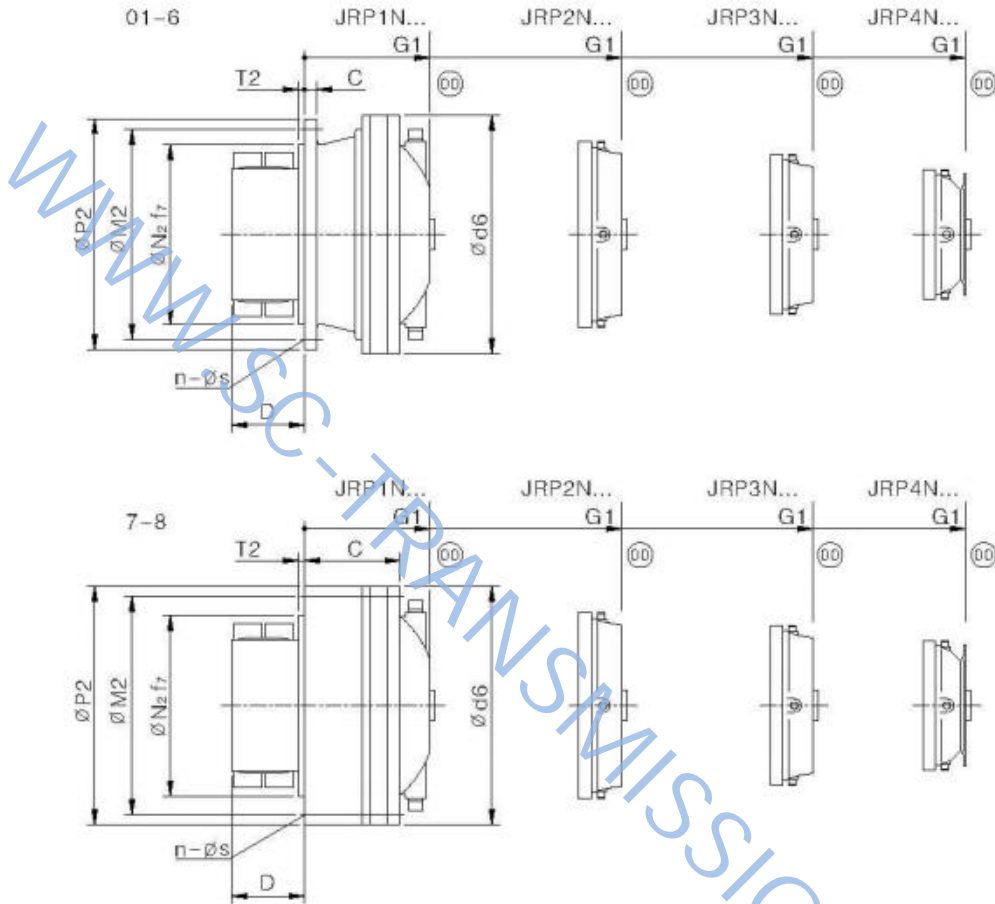
	E	$F_{r[in]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
ADM1	105	10000	6000	4000	5000	3000	2000
ADM2	105	14000	8800	6400	7000	4400	3200
ADM3	130	23800	15500	9600	11900	7800	4800



	E	$F_{r[in]}$					
		$n_1 \cdot h = 10^7$			$n_1 \cdot h = 10^8$		
		1	2	3	1	2	3
AD2	58	3000	2000	1500	1400	1000	700

## 8.外形尺寸和重量 Dimensions & Weight

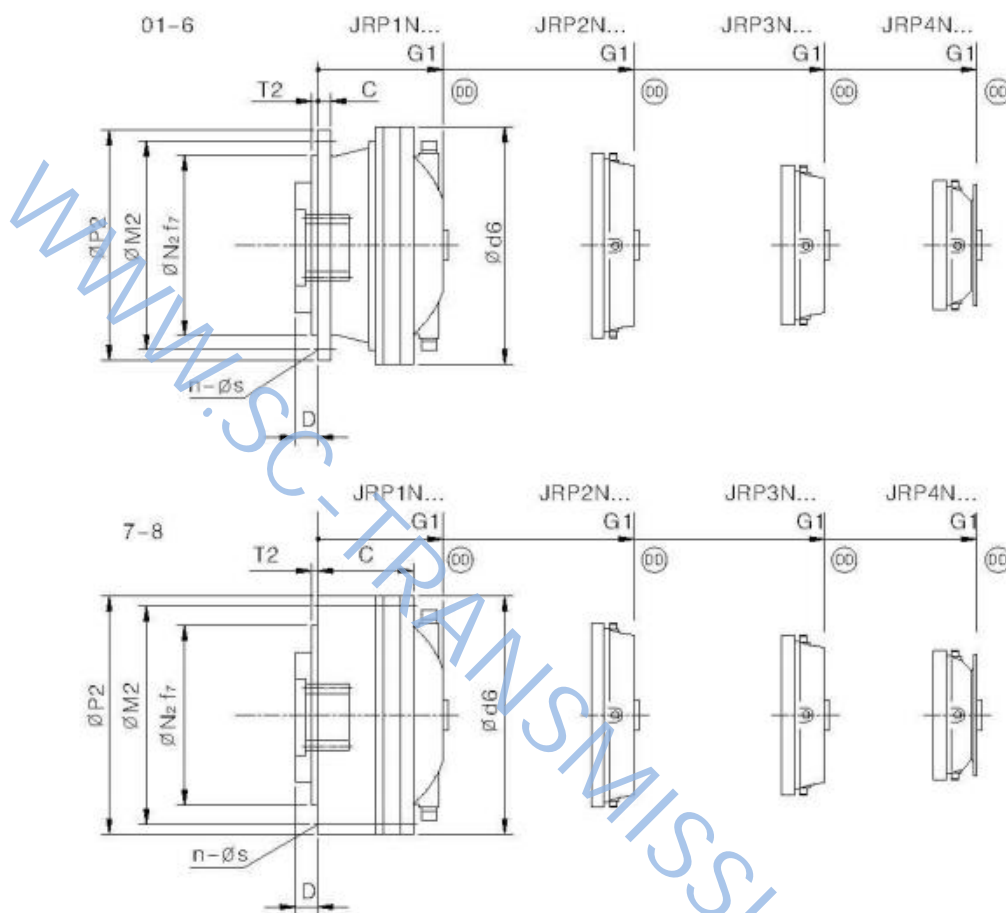
类型 JRP..NA  
Type JRP..NA



NA	T <sub>N</sub> Nm	G1				D	P <sub>z</sub>	C	M <sub>z</sub>	N <sub>z</sub> fr	T <sub>z</sub>	d <sub>6</sub>	法兰孔尺寸 Flange bolts		重量/Weight (kg)			
		1N	2N	3N	4N								n	s	1N	2N	3N	4N
		01	1000	127	167								206	--	55	180	13	165
02	2100	192	245	284	324	85	220	16	195	150	16	240	10	14	31	30	38	40
03	3800	--	245	284	324	85	220	16	195	150	16	240	10	14	--	32	40	42
1	3800																	
2	3800	192	260	312	352	85	220	16	195	150	16	240	10	14	36	48	49	51
3	3800																	
4	6400	259	323	375	415	133	280	20	250	200	45	280	12	16	65	75	78	80
5	6400	--	323	375	--	133	280	20	250	200	45	280	12	16	--	75	78	--
6	9200	241	308	376	428	140	325	25	295	230	40	355	10	18	100	106	110	119
7	13000	186	263	331	383	245	340	125	314	278	18	340	12	16	110	123	130	133
8	13000	--	263	331	--	245	340	125	314	278	18	340	12	16	--	123	130	--



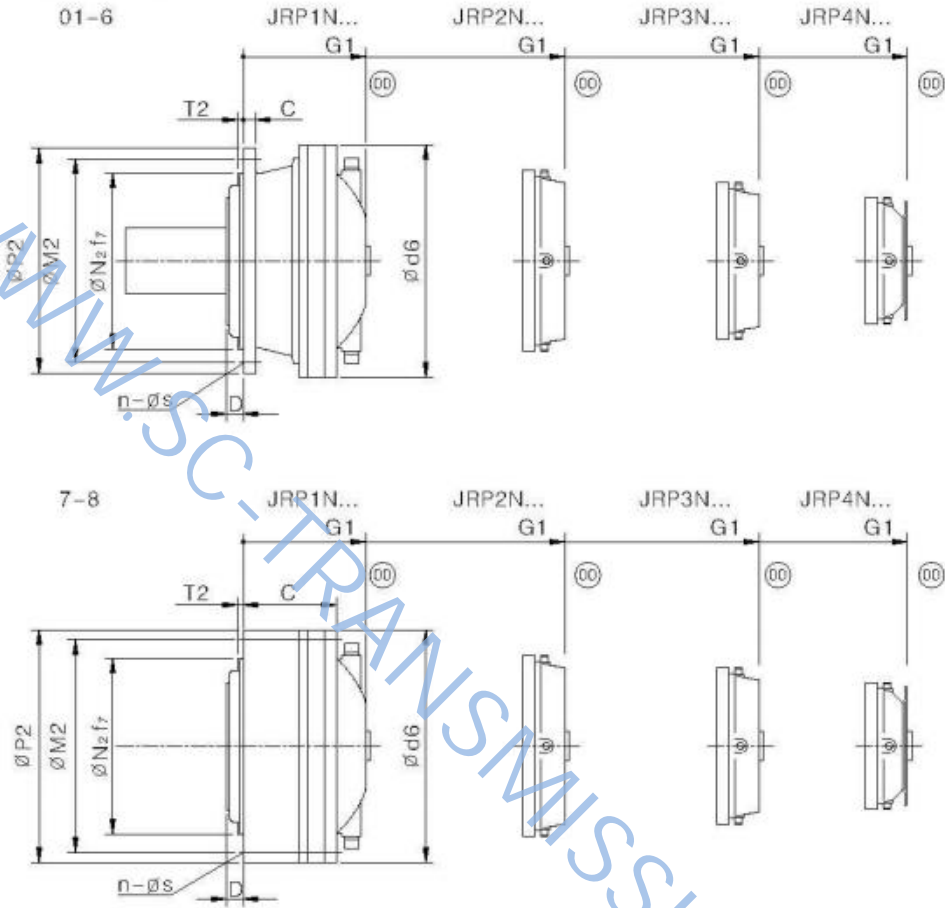
类型 JRP..NC  
Type JRP..NC



NC	$T_N$ Nm	G1				D	$P_z$	C	$M_z$	$N_z f_r$	$T_z$	$d_6$	法兰孔尺寸 Flange bolts		重量/Weight (kg)			
		1N	2N	3N	4N								n	s	1N	2N	3N	4N
01	1000	127	167	206	--	5	180	13	165	110	6	183	8	9	13	17	20	--
02	2100	尺寸请咨询JIE																
03	3800																	
1	3800																	
2	3800																	
3	3800																	
4	6400	206	271	324	363	9	280	15	260	230	6	280	10	14	60	70	73	75
5	6400	--	271	324	--	9	280	15	260	230	6	280	10	14	--	70	73	--
6	9200	241	308	376	428	5	325	25	295	230	5	355	10	18	95	95	110	113
7	13000	166	243	311	363	80	340	105	314	278	15	340	12	16	95	108	125	128
8	13000	--	243	311	--	80	340	105	314	278	15	340	12	16	--	108	125	--



类型 JRP..NB, 类型 JRP..ND  
Type JRP..NB, Type JRP..ND



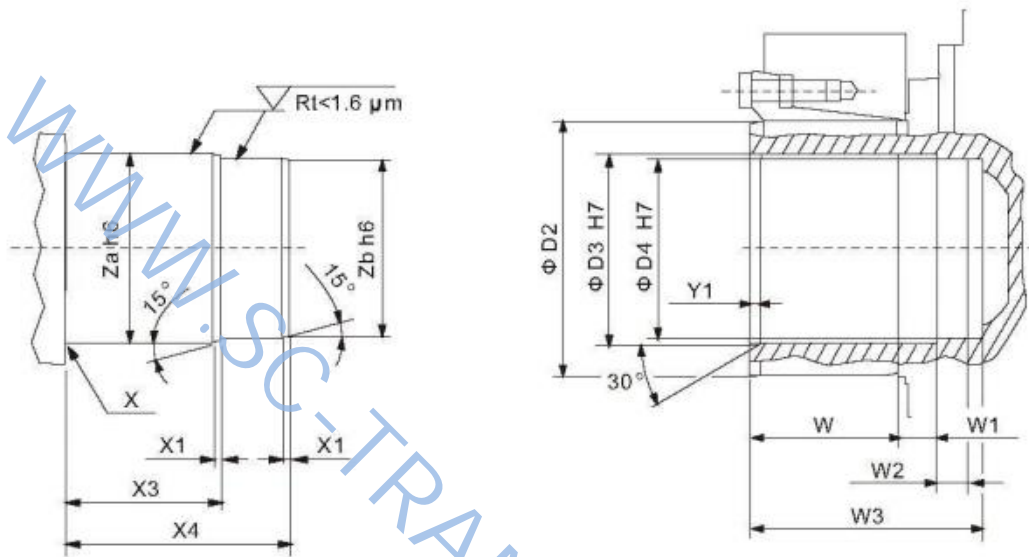
NB ND	T <sub>N</sub> Nm	G1				D	P <sub>z</sub>	C	M <sub>z</sub>	N <sub>z</sub>	T <sub>z</sub>	d <sub>6</sub>	法兰孔尺寸 Flange bolts		重量/Weight (kg)			
		1N	2N	3N	4N								n	s	1N	2N	3N	4N
01	1000	127	167	206	--	7	180	13	165	110	6	183	8	9	14	18	22	--
02	2100	192	245	284	324	15	220	16	195	150	5	240	10	14	31	30	38	40
03	3800	--	245	284	324	15	220	16	195	150	5	240	10	14	--	32	40	42
1	3800	--	261	301	341	39	272	20	245	175	10	240	10	14	--	45	46	48
2	3800	192	260	312	352	15	220	16	195	150	5	240	10	14	36	48	49	51
3	3800	209	277	329	369	39	272	18	245	175	10	240	10	14	45	52	60	62
4	6400	259	323	375	415	40	280	20	250	200	20	280	12	16	65	75	78	80
5	6400	--	330.5	398	--	40	280	20	250	200	20	280	12	16	--	75	78	--
6	9200	280	347	414	467	36	325	25	295	230	12	355	10	18	110	115	125	128
7	13000	186	263	331	383	143	340	125	314	278	18	340	12	16	110	123	130	133
8	13000	--	263	331	--	143	340	125	314	278	18	340	12	16	--	123	130	--

## 9. 输出轴尺寸

### Output Shaft Dimension

A-带锁紧盘的空心轴输出

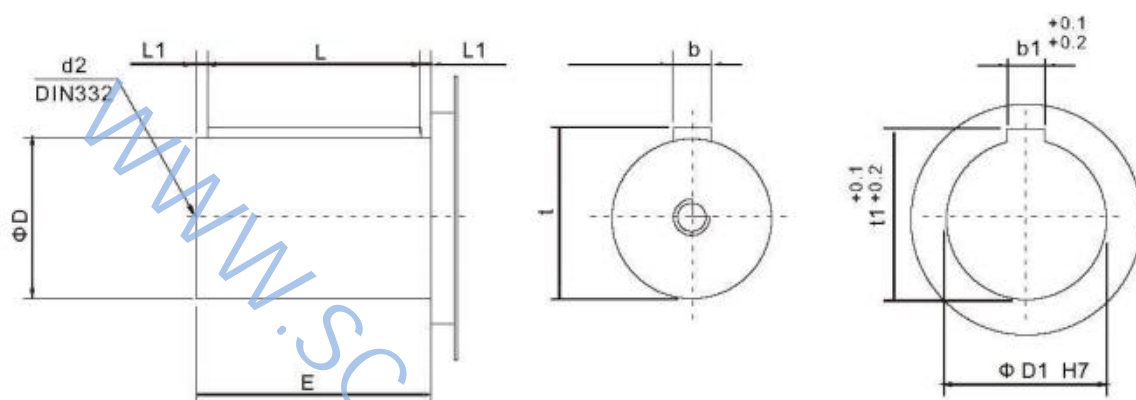
A-Hollow Shaft Output with Locking Plate



	W	W1	W2	W3	D2	D3	D4	Y1	X	X1	X3	X4	Za	Zb
01	29	9	10	50	65 f7	48 H7	30 f7	2	R2	3	33	48	48	30
02	54	16	23	95	100 f7	75 H7	40 f7	2	R2	3	52	92	75	40
03	54	16	23	95	100 f7	75 H7	40 f7	2	R2	3	52	92	75	40
1	54	16	23	95	100 f7	75 H7	40 f7	2	R2	3	52	92	75	40
2-5	80	20	33	135	125 f7	90 H7	50 f7	2	R2	3	62	132	90	50
6	80	20	33	140	140 f7	100 H7	60 f7	2	R2	3	69	135	100	60
7-8	79	6	47	135	165 f7	120 H7	80 f7	5	R2	3	79	130	120	80

B-带平键的实心轴输出

B-Solid Shaft Output with Flat Key

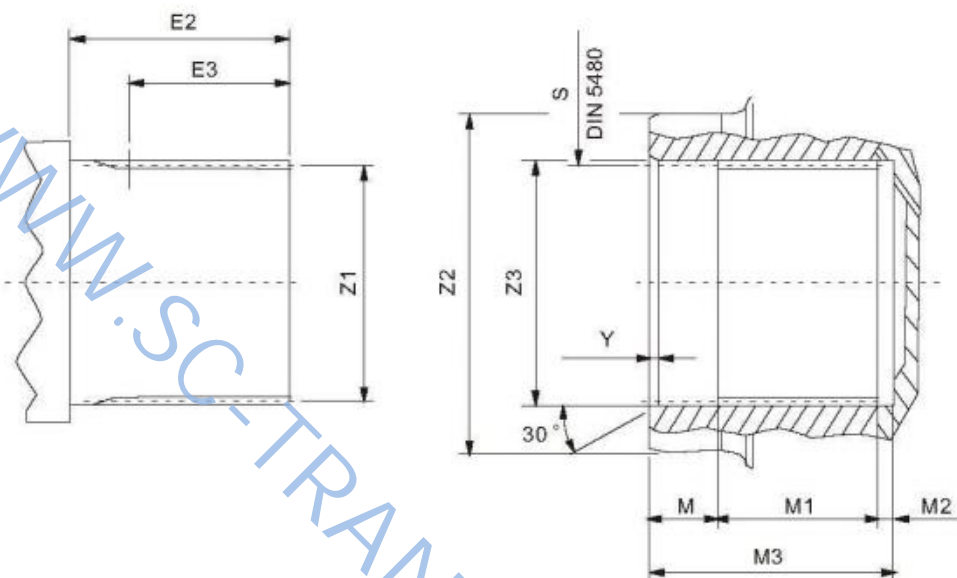


	D	E	L	L1	t	b	d2	D1	t1	b1
01	42 k6	82	70	6	45	12	M10	42	45	12
02	65 m6	105	90	7.5	69	18	M20	65	69	18
03	65 m6	105	90	7.5	69	18	M20	65	69	18
1	65 m6	105	90	7.5	69	18	M20	65	69	18
2	65 m6	105	90	7.5	69	18	M20	65	69	18
3	65 m6	105	90	7.5	69	18	M20	65	69	18
4-5	80 m6	130	110	10	85	22	M20	80	85	22
6	90 m6	170	160	5	95	25	M24	90	95	25
7-8	100 m6	210	200	5	106	28	M24	100	106	28
	100 m6	210	200	5	106	28	M24	100	106	28



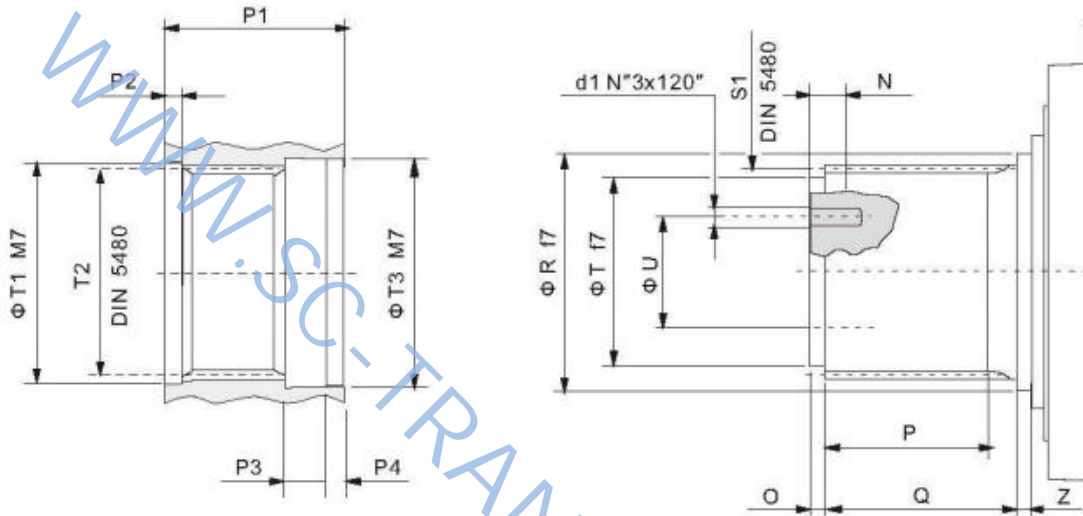
C-带渐开线花键的空心轴输出

C-Hollow Shaft Output with Involute Spline



	M3	M	M1	M2	Y	S	Z2	Z1	E2	E3
01	34.7	5	24.7	5	0.5	A40×36 H10	50 f8	B40×36 c9	32.7	22.7
02	51.5	8	43.6	-	1.0	A58×53 H10	75 f7	B58×53 c9	49.5	41.5
03	44	8	36	-	1.5	A58×53 H10	75 f7	B58×53 c9	42	34
1	44	8	36	-	1.5	A58×53 H10	75 f7	B58×53 c9	42	34
2-5	67	9	50	8	1.0	A70×64 H10	90 g7	B70×64 c9	65	48
6	75	5	62	8	1.0	A70×64 H10	90 f8	B70×64 c9	73	60
7-8	77	7	70	-	1.5	A80×74 H10	100 f7	B80×74 c9	75	68

D-带渐开线花键的实心轴输出  
 D-Solid Shaft Output with Involute Spline



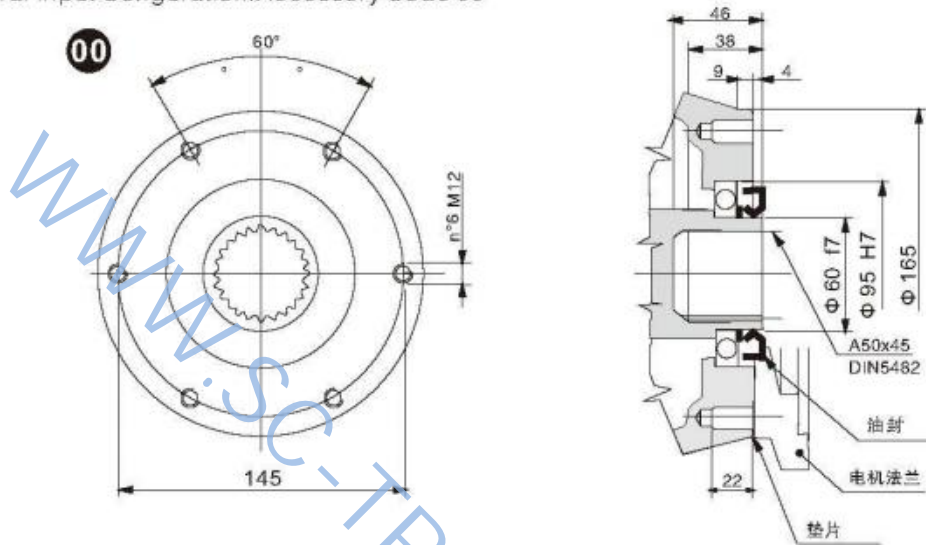
	d1	N	O	P	P1	P2	P3	P4	Q	R	S1	T1	T2	T3	U	Z
01	M6	20	5	30	55	5	14	7	43	42 f7	B40 x 36 c9	42 M7	A40 x 36	42 M7	24	7
02	M10	20	8	38	68	8	13	10	58	60 f7	B58 x 53 c9	60 M7	A58 x 53	60 M7	32	8
03	M10	20	8	38	68	8	13	10	58	60 f7	B58 x 53 c9	60 M7	A58 x 53	60 M7	32	8
1	M10	20	8	50	68	8	13	10	58	60 f7	B58 x 53 c9	60 M7	A58 x 53	60 M7	32	8
2	M10	20	8	38	68	8	13	10	58	60 f7	B58 x 53 c9	60 M7	A58 x 53	60 M7	32	8
3	M10	20	8	50	80	8	16	7	73	60 f7	B58 x 53 c9	60 M7	A58 x 53	60 M7	32	7
4-5	M10	20	10	50	90	10.5	21	10	80	72 f7	B70 x 64 c9	72 M7	A70 x 64	72 M7	40	10
6	M10	25	10	50	90	10.5	22	10	80	85 f7	B80 x 74 c9	80 M7	A80 x 74	85 M7	45	10
7-8	M10	25	10	50	90	10.5	22	10	80	85 f7	B80 x 74 c9	80 M7	A80 x 74	85 M7	45	10
	M14	30	12	65	110	12	22	15	90	105 f7	B100 x 94 c9	105 M7	A100 x 94	105 M7	52	12



## 10. 输入轴尺寸 Input Shaft Dimension

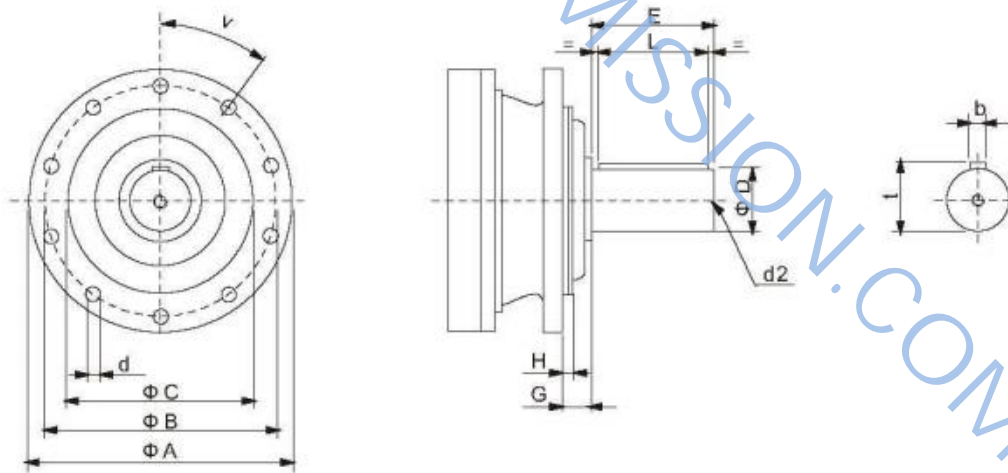
通用输入配置：附件代号00

General Input Configuration: Accessory Code 00

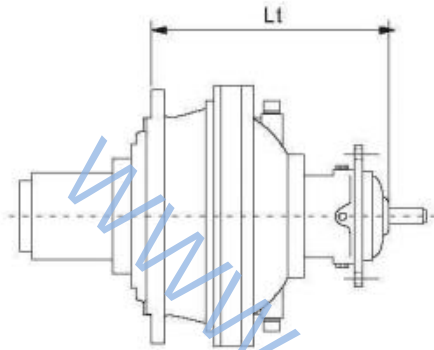


带平键的实心输入轴

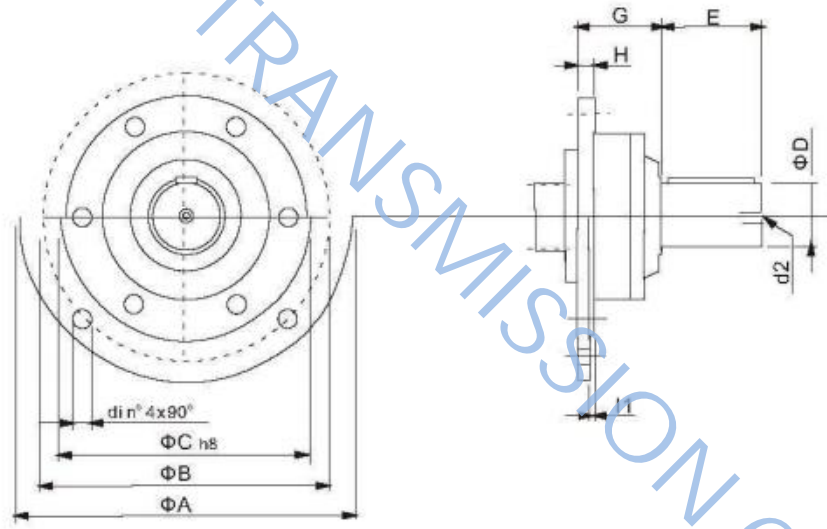
Solid Shaft Output with Flat Key



附件代号 Accessories Code	A	B	C f7	D m6	E	G	H	I	L	b	d	d2 DIN332	t
ADM1	220	195	150	65	105	15	5	16	90	18	14	M20×42	69
ADM2	272	245	175	65	105	39	10	18	90	18	14	M20×42	69
ADM3	280	250	200	80	130	40	20	20	110	22	16	M20×42	85
ADM4	325	295	230	90	170	36	5	25	160	25	18	M24×50	95

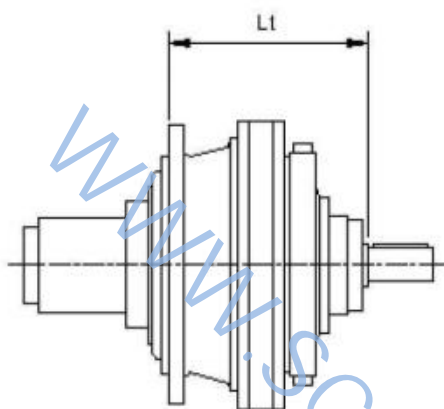


规格 Type	行星级数 Series	Lt		
		ADM1	ADM2	ADM3
02	1	255	296	--
	2	255	296	--
2	2	323	364	--
	3	272	313	--
3	3	340	381	--
	1	386	427	425
4	2	386	318	--
	3	394	435	--
5	3	461	502	--
	1	371	412	--
6	2	371	412	--
	3	439	480	--
7	1	326	346	366
	2	326	367	--
8	3	393	434	--
	2	399.5	440.5	439
	3	407.5	448.5	--



附件代号 Accessories Code	A	B	C	D	d1	d2	E	G	H	I1
AD1	--	--	--	28	--	M10×22	50	60	12	--
AD2	--	--	--	40	--	M10×22	58	60	12	--
AD3	--	--	--	48	--	M10×25	82	60	12	--
AD4	250	215	180	28	13	M10×22	50	60	12	3
AD5	250	215	180	40	13	M10×22	58	60	12	3
AD6	250	215	180	48	13	M10×25	82	60	12	3



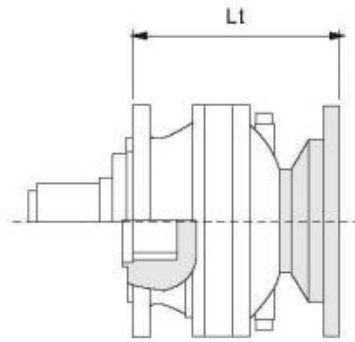


规格 Type	行星级数 Series	Lt ADM1	规格 Type	行星级数 Series	Lt ADM1	
01	1	187	01	1	187	
	2	227		2	227	
	3	266		3	266	
02	1	252	02	1	252	
	2	305		2	305	
	3	344		3	344	
	4	384		4	384	
03	2	305	03	2	305	
	3	344		3	344	
	4	401		4	401	
	2	321		2	321	
1	3	372	1	3	372	
	4	412		4	412	
	1	252		2	1	252
	2	320			2	320
3	372	3	372			
4	429	4	429			
2	1	269	3	1	269	
	2	337		2	337	
	3	389		3	389	
	4	429		4	429	

附件:带IEC电机接口的输入轴  
Accessory: Input Shaft with IEC Motor Interface

附件代号/Accessories Code	对应的IEC电机/Corresponding IEC Motor
IEC63	IEC63
IEC71	IEC71
IEC80	IEC80
IEC90	IEC90
IEC100	IEC100
IEC112	IEC112
IEC132	IEC132
IEC160	IEC160
IEC180	IEC180
IEC200	IEC200
IEC225	IEC225





规格 Type	行星级数 Series	Lt							
		IEC63	IEC71	IEC80 IEC90	IEC100 IEC112	IEC132	IEC160 IEC180	IEC200	IEC225
01	1	147	149	154	155	222	--	--	--
	2	187	189	194	195	262	--	--	--
	3	226	228	233	234	301	--	--	--
02	1	212	214	219	220	287	328	328	359
	2	265	267	272	273	340	--	--	--
	3	304	306	311	312	379	--	--	--
	4	344	346	351	352	419	--	--	--
03	2	265	267	272	273	340	--	--	--
	3	304	306	311	312	379	--	--	--
	4	344	346	351	352	419	--	--	--
1	2	281	283	288	289	356	--	--	--
	3	321	323	328	329	396	--	--	--
	4	361	363	368	369	436	--	--	--
2	1	212	214	219	220	287	318	328	359
	2	280	282	287	288	355	386	396	427
	3	332	334	339	340	407	--	--	--
	4	372	374	379	380	447	--	--	--
3	1	229	231	236	237	304	335	345	376
	2	297	299	304	305	372	403	413	444
	3	349	351	356	357	424	--	--	--
	4	389	391	396	397	464	--	--	--
4	1	278	280	285	286	353	--	391	424
	2	343	345	350	351	418	449	459	490
	3	395	397	402	403	470	--	--	--
	4	435	437	442	443	510	--	--	--
5	2	--	--	--	359	425	457	467	497
	3	418	420	425	426	493	524	534	564
6	1	261	263	268	269	336	367	380	408
	2	328	330	335	336	403	434	444	475
	3	396	389	403	404	471	502	512	543
	4	448	450	455	456	523	--	--	--
7	2	283	285	290	291	358	389	399	430
	3	351	353	358	359	426	457	467	498
	4	403	405	410	411	478	--	--	--
8	2	--	--	299	300	367	320	408	438
	3	365	367	372	373	440	471	481	511

## 11. 安装 Installation

齿轮箱法兰连接，螺栓等级要求不低于10.9级，  
拧紧力矩按下表执行。

Gear unit flange connection, the bolt is not lower than 10.9  
on the richter scale, grade of tightening torque according to  
the following table.

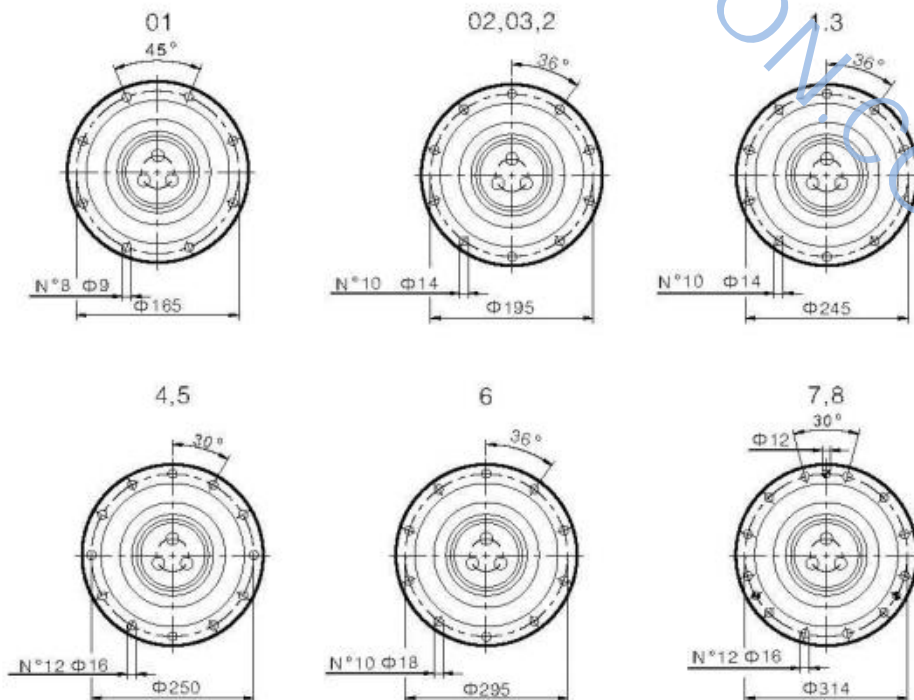
齿轮箱规格 Gear unit size	螺栓规格(10.9) Bolt specification	拧紧力矩[Nm] Tightening torque
01	M8	37
02	M12	127
03	M12	127
1	M12	127
2	M12	127
3	M12	127
4	M14	201
5	M14	201
6	M16	314
7	M14	201
8	M14	201

安装齿轮箱时，要避免轴头受到轴向冲击，防止内部的  
轴承受到永久的损伤。  
建议使用弹性联轴器连接电机与齿轮箱输入轴，可以  
一定程度上修复安装时的不对中。如果电机与齿轮箱  
输入轴必须使用机械连接，请在装配过程中特别注意  
他们之间的对中情况。

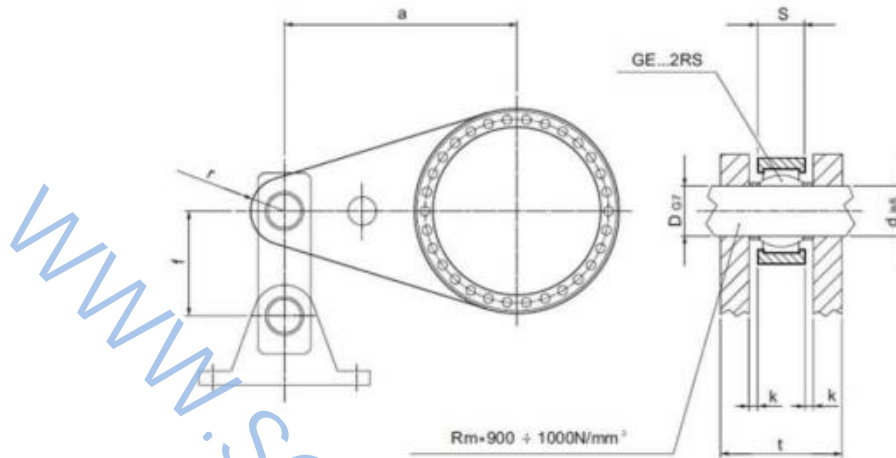
During assembly, violent axial impacts must absolutely be avoided  
since the could damage the internal bearings.  
We are therefore recommending to use couplings that can recover  
misalignment when connecting gearbox and motor. In case of use  
of mechanical components that do not allow misalignment  
recovering, please pay special care to the alignment between  
gearbox and motor during assembling operations.

法兰安装尺寸图

Flange-mounted Dimen Chart



## 12. 扭力臂 Torque Arm



	a min [mm]	s [mm]	r min [mm]	f min [mm]	D d [mm]	k [mm]	t min [mm]
01	200	15	20	90	20	2	35
02	300	15	20	90	20	2	35
03-4	300	20	25	100	25	3	46
5	400	20	25	100	25	3	46
6	500	25	30	150	30	3	55
7	600	25	30	150	30	3	55

## 13. 润滑油 Lubricant Oil

齿轮箱常规供货时不含润滑油，使用前必须添加润滑油。

润滑油的基本特性

在选择润滑油的时候要考虑的重要参数是：

- 正常工作下的运动粘度
- 添加剂

粘度

通常润滑油的运动粘度是指温度在40°C时的标准，但随着温度的上升粘度会减小。如果工作温度在50°C~70°C之间，可以从下表选择润滑油的粘度。

Gear units are supplied without lubricant, therefore the user must carry out correct filling before starting the machine. Fundamental characteristics of the oils

The important parameters to consider when choosing the type of oil are:

- Viscosity at nominal operating conditions
- Additives

Viscosity

Nominal viscosity is referred to a temperature of 40°C, but rapidly decreases with an increase in temperature. If the operating temperature is between 50°C and 70°C, a nominal viscosity can be chosen according to the following guide table.

n2[rpm]	50°C	70°C
n2 > 20	VG150	VG220
20 ≥ n2 > 5	VG220	VG320
n2 ≤ 5	VG320	VG460



特别要注意的是如果输出轴承受大负荷和低转速 (<1 rpm), 建议使用含极压添加剂的高粘度润滑油。

#### 添加剂

润滑油中除正常的抗泡剂和抗氧化添加剂外, 极压和抗磨添加剂是很重要的。使用含极压的润滑油(如美孚SHC)

用于低速齿轮箱是非常有必要的。

#### 润滑油类型

常用的润滑油分为三大类:

- 矿物油 (MIN-油)
- Poly- $\alpha$  Olefin (PAO-油)
- 聚乙二醇 (PG-油)

与矿物油相比, 合成油具有较大的温度使用范围及较高的粘度指数, 即粘度温度变化曲线较为平缓。

#### 温度使用范围参考值:

如果是矿物油, 大约-10°C~90°C (瞬间100°C)

如果是合成油 (PAO-油和PG-油), 大约-20°C~100°C (瞬间110°C)

说明: 各种润滑油的使用温度上下限可能会与上述值有很大差别当使用情况在上述温度范围之外时, 就必须要注意润滑油的燃点以及倾点。

Special attention must be paid to very loaded output stages and with very low speeds (<1 rpm). In case cases, always use high viscosity oils.

#### Additives

In addition to the normal antifoaming and antioxidant additives, it is important to use lubricating oils with additives that provide extreme pressure and antiwear properties.

Therefore it will be necessary to find products with extreme pressure characteristics all the stronger (type Mobil Gear SHC) the lower the gear unit speed.

#### Types of oils

The oils available generally belong to three big families.

- Mineral oils (MIN-oils)
- Poly- $\alpha$  Olefin (PAO-oils)
- Poly-Glycol synthetic oils

Compared with mineral oil, the synthetic oil has a higher temperature range and higher viscosity index, which is the temperature change curve of viscosity. Temperature range reference value:

If it is mineral oil, it is about -10°C~90°C (The instant 100°C)

If it is a synthetic oil, it is about -20°C~100°C (The instant 110°C)

Description: lower limit on the use of all kinds of lubricating oil temperature could be described with values have very big difference when usage outside the temperature range, we must pay attention to the ignition point and pour point of lube oil.

常用润滑油选择表

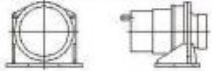
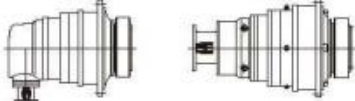
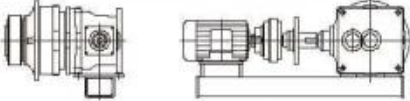
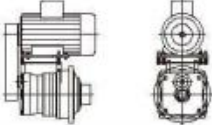
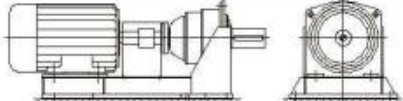
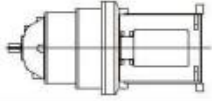
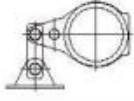


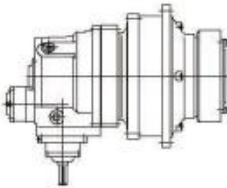
Selection of Oil Table

润滑油 Oil	矿物油 Mineral oil			PAO-油 PAO-oil			PG-油 PG-Oil		
	VG150	VG220	VG320	VG150	VG220	VG320	VG150	VG220	VG320
BP	Energol GR-XP 150	Energol GR-XP 220	Energol GR-XP 320	Enersyn EPX 150	Enersyn EPX 220	Enersyn EPX 320	Enersyn SG 150	Enersyn SG-XP 220	Enersyn SG-XP 320
Castrol	Alpha SP 150	Alpha SP 220	Alpha SP 320	Alphasyn EP 150	Alphasyn EP 220	Alphasyn EP 320	Alphasyn PG 150	Alphasyn PG 220	Alphasyn PG 320
Fuchs	Renolin CKC 150	Renolin CKC 220	Renolin CKC 320	Renolin Unisyn CKC 150	Renolin Unisyn CKC 220	Renolin Unisyn CKC 320	Renolin PG 150	Renolin PG 220	Renolin PG 320
Kluber	Kluberol GEM 1-150	Kluberol GEM 1-220	Kluberol GEM 1-320	Klubersynth EG 4-150	Klubersynth EG 4-220	Klubersynth EG 4-320	Klubersynth GH 6-150	Klubersynth GH 6-220	Klubersynth GH 6-320
Mobil	Mobilgear XMP 150	Mobilgear XMP 220	Mobilgear XMP 320	Mobilgear SHC XMP 150	Mobilgear SHC XMP 220	Mobilgear SHC XMP 320	Glygoyle 22	Glygoyle 30	Glygoyle HE320
Shell	Omala 150	Omala 220	Omala 320	Omala HD 150	Omala HD 220	Omala HD 320	Tivela S 150	Tivela S 220	Tivela S 320
Total	Carter EP 150	Carter EP 220	Carter EP 320	Carter SH 150	Carter SH 220	Carter SH 320	Carter SY 150	Carter SY 220	Carter SY 320
长城		CKD220	CKD320						
昆仑		CKD220	CKD320						

## 14. 附件 Add-on Pieces

附件表

Table of Add-on Pieces

标记 Identification	附件 Add-on Piece		附图 Representation
00	无附件 / Without add-on Piece		
01	齿轮箱基座 Gear housing base	见第45页 see page 45	
70 1)	电机安装法兰 (输入端) Motor bell housing (input)	见第51-56页 see page 51-56	
71 1)	电机支架 (电动机, 联轴器) Motor bracket (motor, coupling)	见第49页 see page 49	
72	电机支架 Motor bracket	见第49页 see page 49	
73 1)	电机浮动底座 (电动机, 联轴器, 齿轮箱) Motor swing-base (motor, coupling, gear unit)	见第49页 see page 49	
74 1)	安装法兰 (输出端) Bell housing (output)	敬请垂询 On request	
75	(单侧)扭力臂 Torque reaction arm (on one side)	见第46页 see page 46	
76	(双侧)扭力臂 Torque reaction arm (on both side)	见第47页 see page 47	
77	扭力轴支撑 Torsion shaft support	见第48页 see page 48	
78	逆止器 (JRP2K../JRP3K..) Backstop (JRP2K../JRP3K..)	敬请垂询 On request	
79	特殊设计 Special design		

1)不能应用钢性联轴器

1)Not for rigid couplings



## 15. 齿轮箱油位 Oil Level of Gearbox

### 水平安装

#### 水平的位置

水平安装的齿轮箱通常油量加到中心线上，见图A。如果输出转速比较低( $n_2 < 5$  rpm)，建议多加高50~100mm的润滑油，见图B。

如果输出转速极低( $n_2 < 1$  rpm)，或者长时间不使用齿轮箱，那么最好把箱体装满润滑油。在这种情况下，必须设计一个补油箱。

### Horizontal mounting

#### Position of levels

With horizontal mounting of the gear unit, the normal level for guaranteeing correct lubrication is located at the center line, Fig.(A). For applications with very low output rotation speed ( $n_2 < 5$  rpm), it is advisable to fix the level at a value higher than 50–100mm, Fig.(B).

If the output speed is extremely low ( $n_2 \leq 1$  rpm), or if long gear unit downtimes are foreseen, it is advisable to fill the entire box. In this case a special auxiliary tank must be provided.

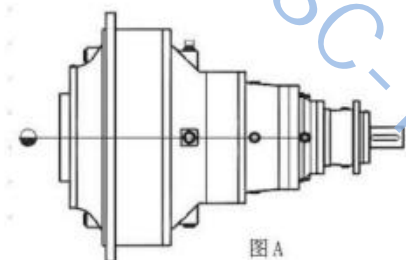


图 A

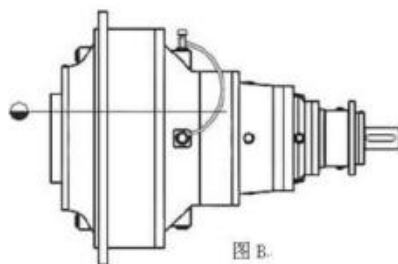


图 B.

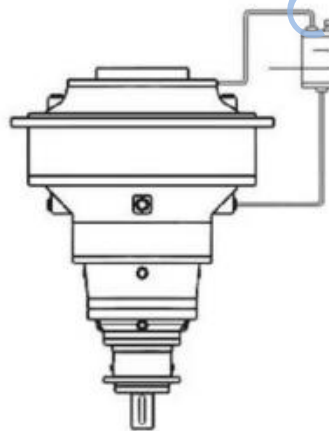
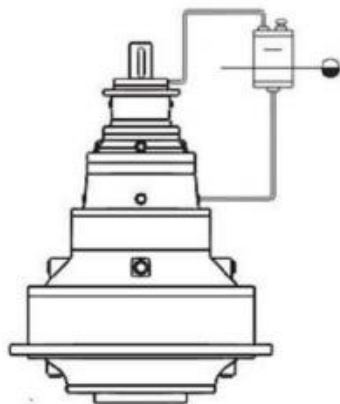
### 竖直安装

在竖直安装时通过补油箱供油润滑，见图。

竖直安装时润滑油须加满齿轮箱，补油箱的设计考虑到运行状态下润滑油的体积变化。补油箱既可固定在齿轮箱箱体上，也可固定在用户设备的机架上。

### Vertical mounting

Several rules must be followed with vertical mounting, and in any case whenever the gear unit has to be completely filled. During filling, an air bubble can form in the upper part, and which must be eliminated in order to avoid insufficient lubrication of the seal. Also, since the volume of oil increases with the temperature, an auxiliary tank must be provided to allow the oil to expand without creating dangerous pressures inside the gear unit.



## 16.注油量 Oil Quantity

下表数据为齿轮箱B3水平安装时的注油量。如果齿轮箱为V5/V6垂直安装时，注油量为B3安装时的两倍。

The following table data of oil quantity is for horizontal mounting(B3) of gear unit. if the mounting type of gear unit is vertical mounting, the oil quantity is twice as much as the following table data.



型号	输出轴	注油量[L] oil quantity[L]	型号	输出轴	注油量[L] oil quantity[L]	型号	输出轴	注油量[L] oil quantity[L]
JRP1N..01	A-B-C-D	0.5	JRP1N..3	B-D	1.2	JRP3N..6	A-B-C-D	3.3
JRP2N..01	A-B-C-D	0.8	JRP2N..3	B-D	2	JRP4N..6	A	4
JRP3N..01	A-B-C-D	0.9	JRP3N..3	B-D	1.8		B-D	5
JRP1N..02	A-B-D	1	JRP4N..3	B-D	2.2		C	3.8
	C	1.2	JRP1N..4	A-B-D	1.6	JRP2N..7	A	2.5
JRP2N..02	A-B-D	1.2		C	1.8		B-D	4.5
	C	1.5	JRP2N..4	A-B-D	2.4		C	2.5
JRP3N..02	A-B-D	1.6		C	2.6	JRP3N..7	A	3.5
	C	1.7	JRP3N..4	A-B-D	2.3		B-D	5.3
JRP4N..02	A-B-D	1.7		C	2.5		C	3
	C	1.8	JRP4N..4	A-B-D	2.5	JRP4N..7	A	3.7
JRP2N..03	A-B-D	1.3		C	2.8		B-D	5.5
	C	1.1	JRP1N..5	A-B-D	1.6		C	3.5
JRP3N..03	A-B-C-D	1.6		C	1.8	JRP2N..8	A	2.5
JRP4N..03	A-B-C-D	1.7	JRP2N..5	A-B-D	2.4		B-D	4.5
JRP2N..1	B-D	1.7		C	2.6		C	2.5
JRP3N..1	B-D	1.7	JRP3N..5	A-B-D	2.3	JRP3N..8	A	3.5
JRP4N..1	B-D	1.8		C	2.5		B-D	5.3
JRP1N..2	A-B-D	1	JRP4N..5	A-B-D	2.5		C	3
	C	1.1		C	2.8			
JRP2N..2	A-B-D	1.6	JRP1N..6	A-C	2.2			
	C	1.5		B-D	3			
JRP3N..2	A-B-C-D	1.6	JRP2N..6	A	2.2			
JRP4N..2	A-B-D	2.2		B-D	3.5			
	C	2.5		C	3.2			

## 17. 安装位置 Mounting Positions

	01-6	7-8	01-6	7-8
输出轴 B、D	 500	 500	 900	 900
			 600	 600
输出轴 C	 500	 500	 900	 900
			 600	 600
输出轴 A	 500	 500	 900	 900
			 600	 600

● 放油螺塞 Drain plug

◐ 视油镜 oil level plug

○ 通气器 breather and filling plug



## 4. JRPH系列行星齿轮减速机 JRPH Series Planetary Reducer

### 产品用途/Product application:

本系列产品主要应用于回转机构的驱动。产品结构紧凑，安装空间小，驱动扭矩大，广泛应用于塔机、风力发电、起重等设备上。该系列产品的动力输入可有各种电机和驱动泵配置，可满足不同用户的各种要求。

This series of products mainly used in slew-driven system. Compact structure, small installation space, high drive torque, and is widely used in tower cranes, wind power, hoisting equipment and other devices. The driving force for the importation of products can have a variety of motor and pump drive configurations to meet various requirements of different users.

### 产品性能特点 ( Product performance characteristics ):

本产品是我公司引进欧洲技术，产品遵循模块化、最优化设计理念。齿轮采用特殊修形技术并经渗碳淬火磨削加工，确保了产品的低噪音、低振动和高承载、长寿命的要求。轴承、油封采用世界知名品牌，有效地确保了整机性能。

This product is designed with the introduction of European technology, follow modular and optimization design concept. Special modification of gear technology and carburizing quenching by grinding to ensure that the products low-noise, low vibration and high load, long-life requirements. Bearings, oil seals using a world-renowned brands, ensuring the effective performance of the machine.



### 技术参数/Technical parameters:

型号 Model	额定输出扭矩 Rated output torque N.m	最大输出扭矩 Max. output torque N.m	速比范围 Ratio range
JRPH08	8000	15000	可按用户具体要求生产 Can be made as per user requirements
JRPH12	12000	25000	
JRPH18	18000	30000	
JRPH25	25000	50000	
JRPH35	35000	80000	
JRPH40	40000	90000	
JRPH50	50000	100000	
JRPH80	80000	140000	
JRPH100	100000	180000	

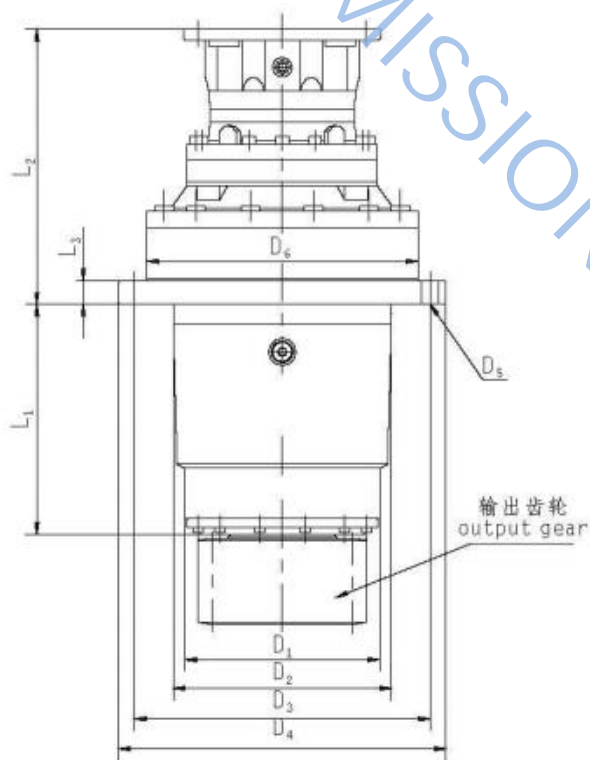


外形尺寸 ( Overall dimensions ) :

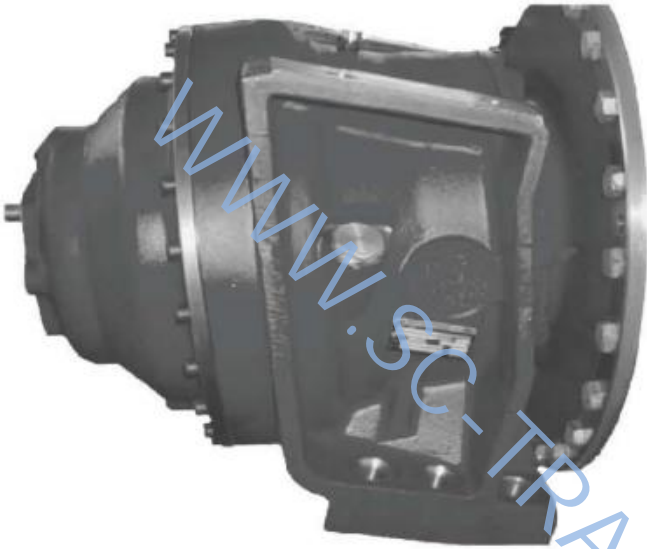
型号 Model	D1	D2	D3	D4	D5	D6	L1	L2	L3	输出齿轮参数 Output gear parameters
JRPH08	184	290	325	350	14.5	290	289	196	26	输出齿轮 可按用户 要求生产 Output gear can be made as per user requirements.
JRPH12	230	280	314	348	17	348	300	360	98	
JRPH18	250	280	380	420	17	348	295	353	30	
JRPH25	300	425	450	500	22	400	360	500	40	
JRPH35	300	425	460	500	22	428	350	520	40	
JRPH40	—	400	445	490	21	428	110	700	40	
JRPH50	340	400	510	560	22	445	430	630	30	
JRPH80	370	470	600	640	22	542	470	670	36	
JRPH100	—	555	600	645	28	542	100	1100	40	

注：上述尺寸仅供参考，具体安装尺寸与JIE联系，JIE也可按用户要求生产。

Note: above dimensions for reference, detail dimensions refer to JIE, JIE also can be made as per users requirements.



## 5. JRPJ系列行星齿轮减速机 JRPJ Series Planetary Reducer



### 产品用途/Product application:

本系列产品用于大功率水泥搅拌机，可满足混凝土搅拌机搅拌滚筒容量7~12立方米的规格要求。

This series of products for high-power cement mixer, drum mixer to meet the concrete mixing capacity from 7 to 12 cubic meters tyle requirements.

### 产品性能特点.Product performance characteristics:

本产品是我公司引进欧洲技术，产品遵循模块化、最优化设计理念。齿轮采用特殊修形技术并经渗碳淬火磨削加工，确保了产品的低噪音、低振动和高承载、长寿命的要求。轴承、油封采用世界知名品牌，有效地确保了整机性能。

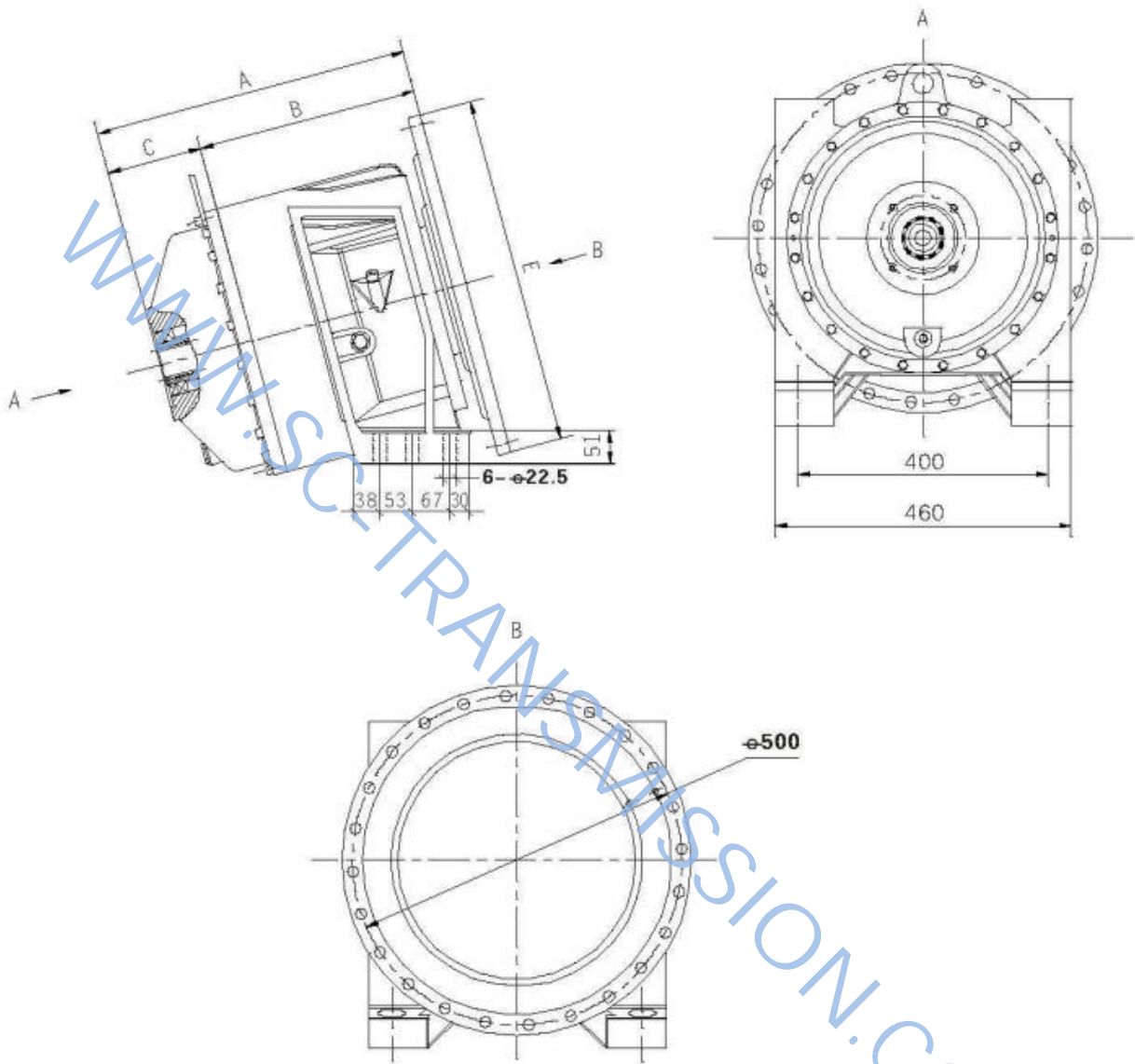
This product is designed with the introduction of European technology, follow modular and optimization design concept. Special modification of gear technology and carburizing quenching by grinding to ensure that the products low-noise, low vibration and high load, long-life requirements. Bearings, oil seals using a world-renowned brands, ensuring the effective performance of the machine.



### 技术参数/Technical parameters:

型号 Model	JRPJ301		JRPJ401	JRPJ501	JRPJ701
滚筒容积(m <sup>3</sup> ) Drum volume	7	8	9	10	12
滚筒最大安装角度(°) Max.installation angle of drum	15	12	12	11	10
最大输入转速(rpm) Max.input speed	2500	2500	2500	2500	2500
总减速比(i) Total ratio	141	141	134	134	134
输出扭矩(N.m) Output torque	42000	48000	54000	60000	72000
减速机重量(不含油)(Kg) Weight (without oil)	242	242	335	340	350
加油量(L) Oil volume	7.5	7.5	11.5	11.5	11.5
传动方式 Drive style	同轴式 Coaxial	同轴式 Coaxial	同轴式 Coaxial	同轴式 Coaxial	同轴式 Coaxial

外形尺寸/Overall dimensions:



JRP  
系列行星齿轮箱  
Series Planetary Gear Units

型号 Model	JRPJ301	JRPJ401	JRPJ501	JRPJ701
A(mm)	459	558	558	558
B(mm)	260	333	333	333
C(mm)	199	225	225	225
E(mm)	530(h8)	530(h8)	530(h8)	530(h8)

注：保留产品改进设计，尺寸有可能变动，请索取详细外形安装图。

Note: Keep the product's designing, the demensions may different, please ask for the detail overall dimensions.