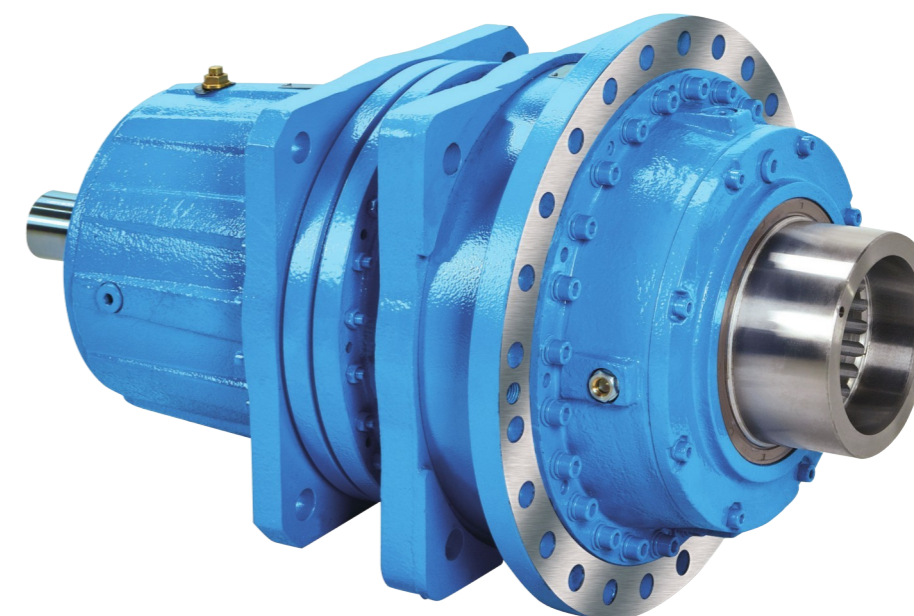


P 行星齿轮箱

P Planetary Gearbox



P 行星齿轮箱

P Planetary
Gearbox

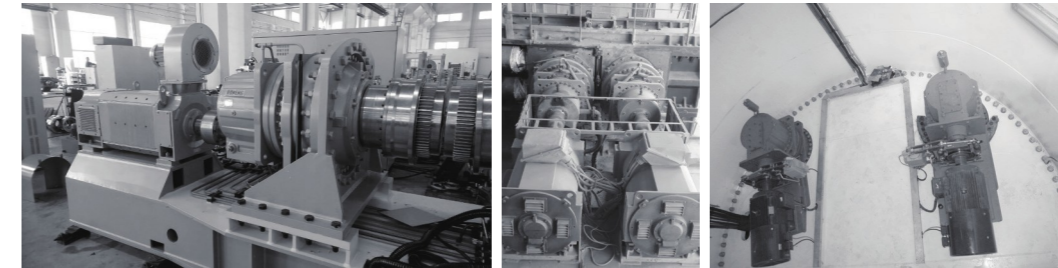
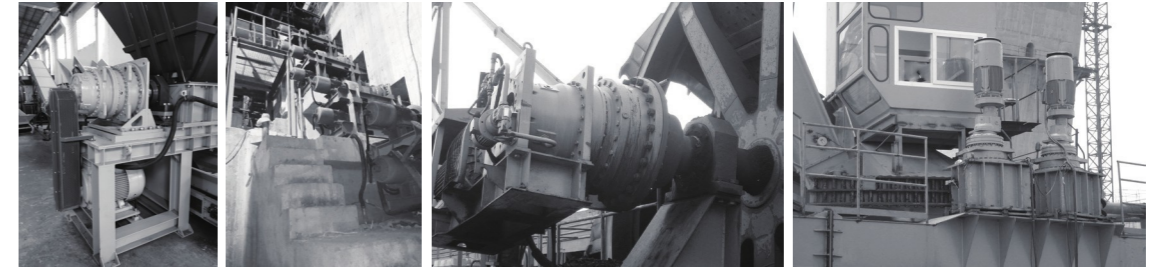
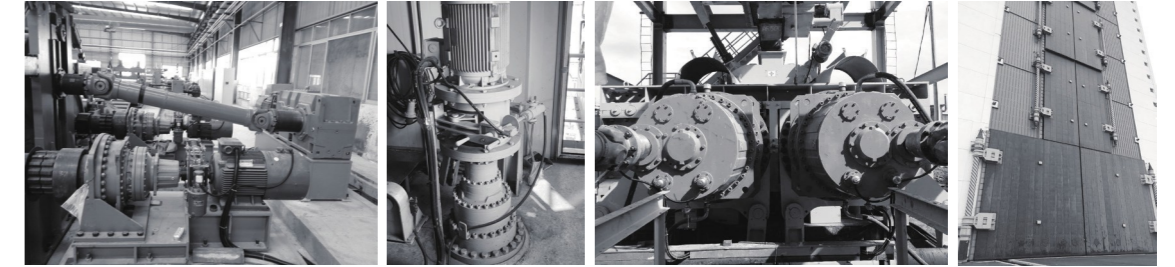
Edit date 10/2025
Selection Catalogue: C05.0012

P 行星齿轮箱

- ◆ 太阳轮、行星轮均采用优质合金钢渗碳淬火处理，齿圈采用优质合金钢表面硬化处理，所有齿轮均磨齿加工。
- ◆ 箱体和行星架采用球墨铸铁材质，箱体及行星架均通过计算机模拟变形和应力分析等手段进行优化设计，使承载能力更高。
- ◆ 高度的模块化设计可以使许多基本零件标准化，这样在批量生产中更加经济，并有效地减少了库存量，提高供货速度。
- ◆ 所有轴承采用规格合适的滚柱轴承，输出轴承采用满装滚柱轴承，径向承载能力更强。
- ◆ 输入轴、输出轴采用径向骨架油封，其中输出轴采用双油封。
- ◆ 附带丰富的配件供客户选择，并可与我公司其他产品组合成功能更多的产品。

Planetary Gearbox

- ◆ The sun wheel and planetary wheel are made of high quality quenching alloy steel, the ring gears adopt in hardened surface alloy steel, all grinding gears.
- ◆ Nodular cast iron housing and planetary carrier, all designed by computer simulation and stress analysis method, which will enlarge the loading capacity.
- ◆ Highly modular design makes all the spare parts standardization and reducing the stock. Improve delivery speed.
- ◆ All bearings using roller bearings, the output bearing adopts fully loaded roller bearings, which have stronger radial bearing capacity.
- ◆ The input and output side with radial skeleton seal, wherein the output double seals.
- ◆ Lots of accessories for choose and can be used with other products of our company.



产品广泛应用于起重运输、电力能源、水泥建材、金属冶炼加工、化工环保等各个领域。

泰工公司总部和各大区域的技术专家以及各区域办事处的应用工程师、售后服务技师竭诚为您提供全面的技术咨询和完美的服务。

Products are widely used in lifting transportation, power energy, cement building materials, metal smelting and processing, chemical environmental protection and othefields.

Taigong Transmission company headquarters and major regional technical experts and regionaffces of the application engineers, after-sales service technicians dedicated to provide you with comprehensive technical advice and perfect service.

目录

Contents

注意事项

- ◆ 样本中的结构示意图、外形图及其他附图只属范例，无严格比例要求。（未注尺寸单位均为 mm）。
- ◆ 所注重量仅为平均值，并不具有约束力。

⚠️ 必须严格遵守以下各项

- ◆ 为防止意外事故发生，所有旋转部件均按照使用者所在国家和地区的安全规范由购置方加罩保护。
- ◆ 试车之前必须认真阅读使用说明书。齿轮箱在供货时已处于准运行状态，运行前需加注润滑油。
- ◆ 本样本中注油量只作为参考值，实际注油量应以油尺上的标记为准。
- ◆ 润滑油粘度应按齿轮箱使用工况及使用环境温度选取。
- ◆ 推荐采用知名品牌的润滑油。

产品功能标识



油 镜



通 气 帽



进 油 孔



放 油 孔

Note

- ◆ The structure scheme, appearance diagram and other attached diagrams in sample are examples, there is no strict proportion requirement. (The unmarked dimension units are mm).
- ◆ We can only refer to the marked weight in the manual.

⚠️ You must conform to the following instructions

- ◆ To prevent accidents, all the rotation parts should be added with protective covers according to local safety regulations and laws.
- ◆ Before testing, users should read instruction manual carefully.
- ◆ Gearbox has been tested before delivered, users should add lubrication oil before running.
- ◆ We can only refer to the marked oil in the manual. Actual oil level should be the same with the mark on oil immersion lens.
- ◆ Lubrication oil viscosity should be selected according to working conditions and the temperature of local environment.
- ◆ Users can only use high quality lubrication oil.

Product Function Mark



Oil glass



Breather



Oil filler

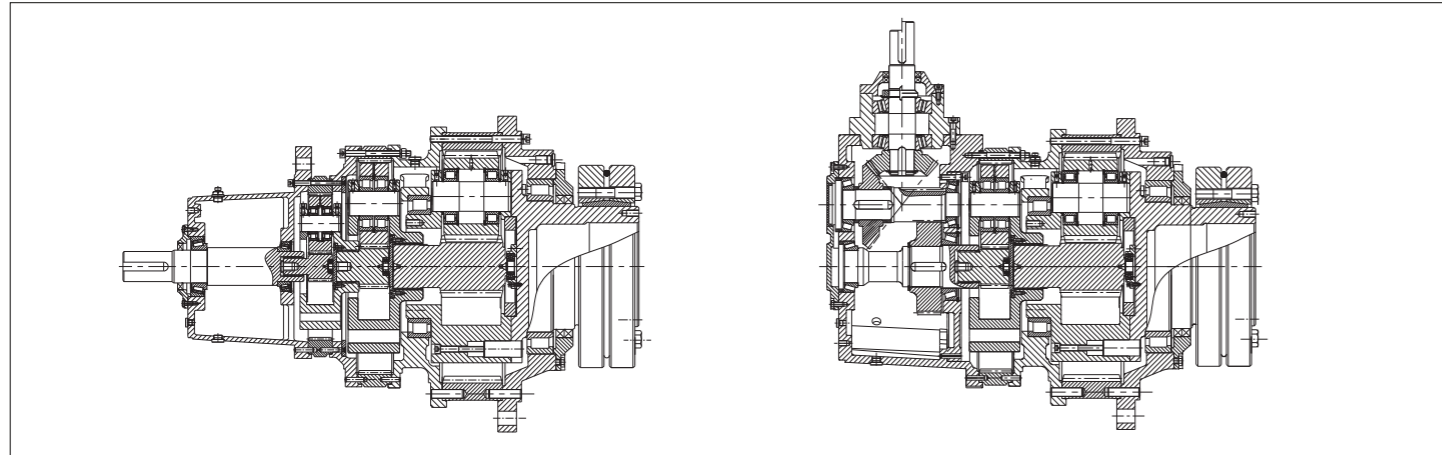


Oil drain

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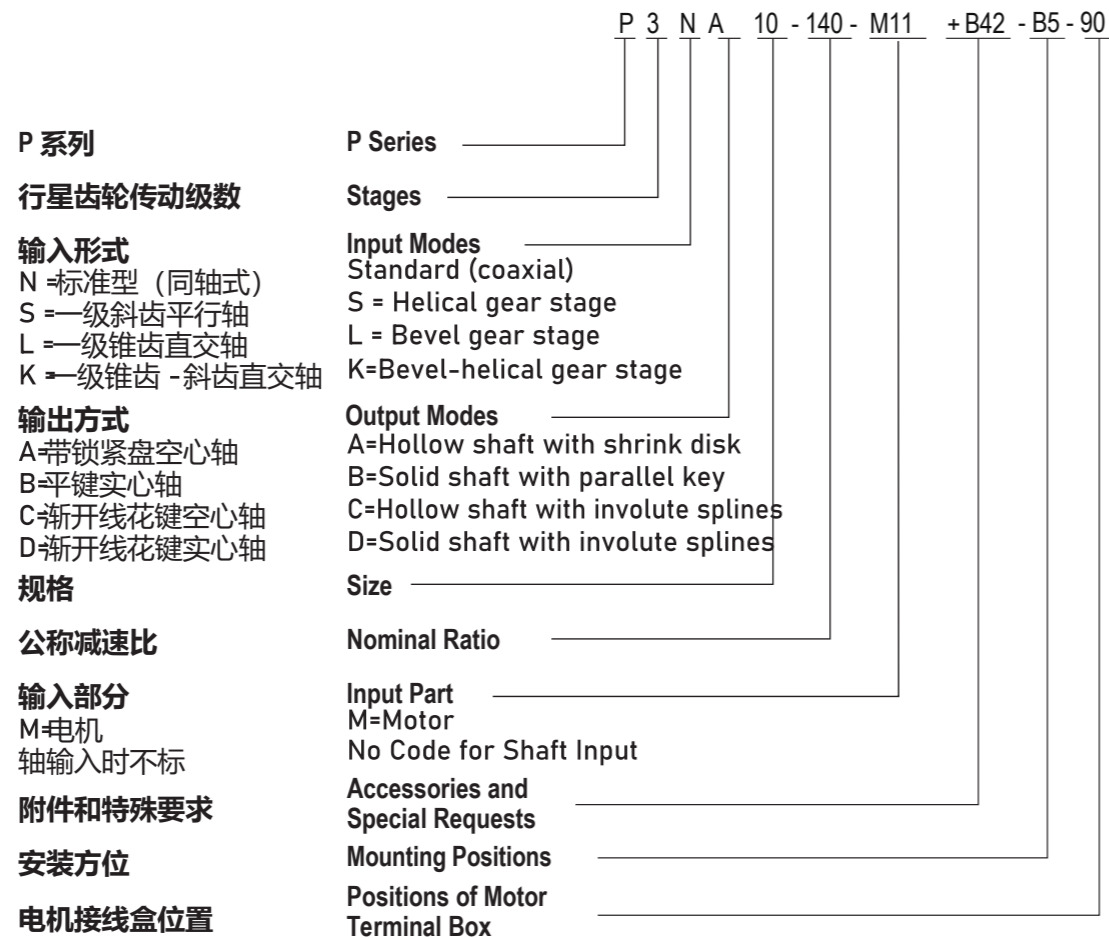
1 结构示意图

1 Sectional Drawings



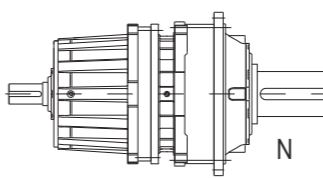
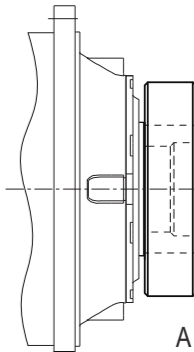
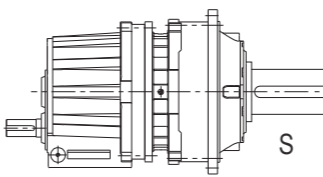
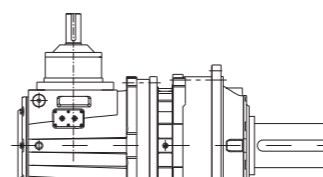

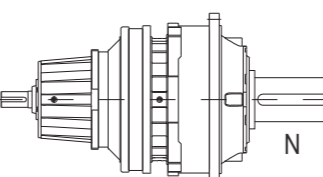
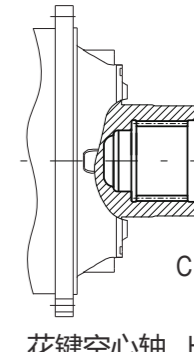


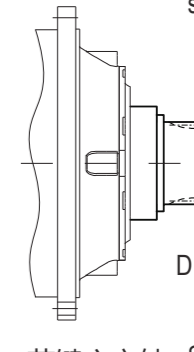
2 型号表示方法

2 Type Designation

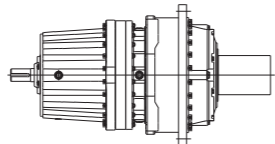
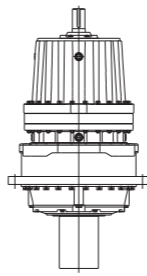
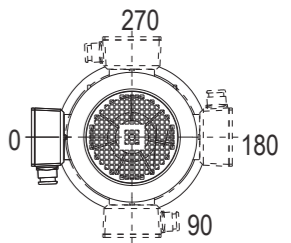
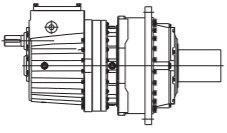
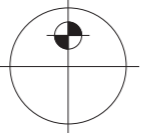
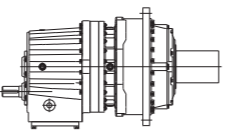
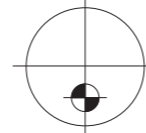
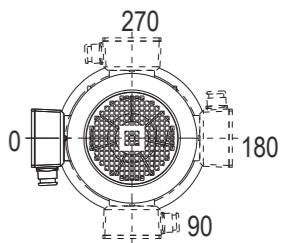
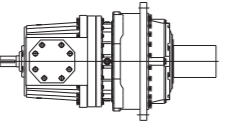
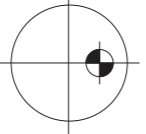
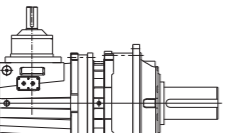
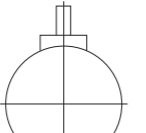
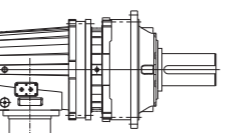
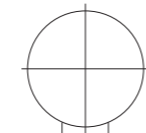
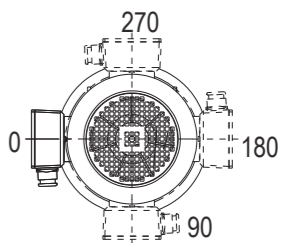
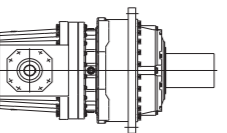
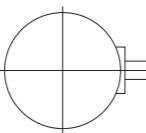
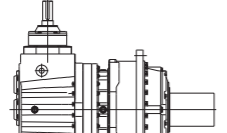
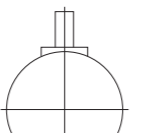
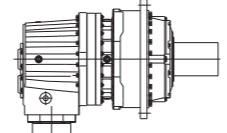
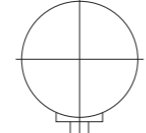
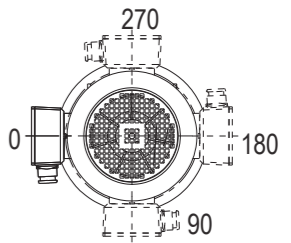
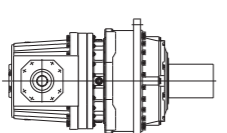
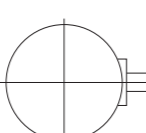


3 齿轮箱输入 / 输出方式

3 Input and Output Modes

输入形式 Input modes		输出方式 Output modes
二级行星齿轮转动 2-stage planetary gearbox		
P 2 N .. (i:25-40) 标准型 (同轴式) Standard (Coaxial)		 P..A.. 锁紧盘空心轴 Hollow shaft with shrink disk
P 2 S.. (i:45-125) 一级斜齿平行轴 Planetary gearbox with primary helical		
P 2 L.. (i:31.5-100) 一级锥齿直交轴 Planetary gearbox with primary bevel		
P 2 K (i: 112-500) 一级锥齿 - 斜齿直交轴 Planetary gearbox with primary bevel-helical gear		
三级行星齿轮转动 3-stage planetary gearbox		
P 3 N.. (i:140-280) 标准型 (同轴式) Standard (Coaxial)		 P..C.. 花键空心轴 Hollow shaft with internal splines
P 3 S.. (i:280-900) 一级斜齿平行轴 Planetary gearbox with primary		
P 3 K.. (i:560-4000) 一级锥齿 - 斜齿直交轴 Planetary gearbox with primary		
	 P..D.. 花键实心轴 Solid shaft with external splines	

**4 安装方位电机
接线盒位置**
**4 Mounting Position, Position
of Motor Terminal Box**

		水平安装 Horizontal		垂直安装* Vertical*		电机接线 盒位置 Position of Motor Terminal Box
1 同轴式齿轮箱 1 Coaxial planetary gearbox	P.N.					
			B5	V1	V3	
2 斜齿 - 行星齿轮箱 2 Helical-planetary gearbox	P.S.					
		B51*	B53			
		B52	B54	V11	V31	
3 锥齿 - 行星齿轮箱 3 Bevel-planetary gearbox	P.L.					
		B51*	B53			
		B52	B54	V11	V31	
4 锥齿 - 斜齿 - 行星 齿轮箱 4 Bevel-helical- planetary gearbox	P.K.					
		B51*	B53			
		B52	B54	V11	V31	

* 需考虑齿轮箱的润滑,
可选润滑附件详见 P56,P57

03

*if lubrication required
can be found on P56,P57

5 选型及举例
5 Type Selection and Example

说明	Description	代号 Symbols	参数计算 Parameters Calculation and Guidelines				
1	被驱动设备系数 Driven Machine Factor	f ₁	查 P7、P8 页 Refer to f table on P7 and P8.				
2	原动机系数 Prime Mover Factor	f ₂	原动机系数	Prime Mover Factor	f ₂		
			电机、液压马达、汽轮机	Electric motor, hydraulic motor, turbine	1.0		
			4-6 缸活塞发动机, 周期变化 1:100 至 1:200	4-6 cylinder engine with 4-6 cylinders, cyclic variation 1:100 to 1:200	1.25		
	1-3 缸活塞发动机, 周期变化 1:100	1-3 cylinder engine with 1-3 cylinders, cyclic variation 1:100	1.5				
3	齿轮箱可靠度系数 Factor for gearbox reliability	S _F	查 P8 页 S Refer to S table on Page P8.				
4	输入转速 Input Speed	n ₁	≤1500 r/min 更高转速请咨询 Consult us if higher speed required.				
5	确定减速比 Calculation of the ratio	i	i = n ₁ /n ₂				
6	确定齿轮箱类型选择传动效率 Determination of gearbox type and transmission efficiency	η	类型 Type	η	类型 Type	η	
			P _{2N} ..	94%	P _{3N} ..	92%	
			P _{2L} ..	93%	P _{3S} ..	91%	
			P _{2K} ..	91%	P _{3K} ..	89%	
7	以被驱动设备所需的扭矩或功率, 确定齿轮箱输入功率 Calculation of the input power of the gearbox on basis of the torque and power required by the driven machine.	P ₁	P ₁ = T ₂ · n ₁ / (9550 · i · η) 或 P = P ₂ / η				
8	根据计算, 查传动能力表, 确定齿轮箱规格 Determination of gearbox size referring to the table of Transmission Capacity.	T _{2N} , P _{1N}	T _{2N} ≥ T ₂ · f ₁ · f ₂ · S _F or P _{1N} ≥ P ₁ · f ₁ · f ₂ · S _F 如果不满足条件: 3.33 · P ₁ ≥ P _{1N} is not met, Please consult us.				
9	峰值扭矩校核 * Check Peak Torque	T _A	P _{1N} ≥ T _A · m · f ₃ / 9550	每小时峰值 Load peaks 负荷次数 per hour			
			单向载荷 Steady direction of load	0.5	0.65	0.7	0.85
			交变载荷 Alternating direction of load	0.7	0.95	1.10	1.25
10	输出轴径向力校核 Check the radial on the shafts.	F _{r2}	查 P29 页表 F See F _{r2} table on P29.				
11	计算功率利用率确定其系数 Calculation of the utilization	f ₁₄	功率利用率 = P ₁ /P _{1N} · 100% 确定其系数 f ₁₄ : factor for utilization	功率利用率 Utilization	30% 40% 50% 60% 70% 80% 90% 100%		
12	环境温度系数 Ambient temperature factor	f _t	查 P8 页 Refer to f table on Page 8.				
13	热容量校核 Check thermal capacity	P _G	P ₁ ≤ P _G = P _{G1} · f _t · f ₁₄ 齿轮箱可不带辅助冷却装置	P ₁ ≤ P _G = P _{G1} · f _t · f ₁₄ no cooling device is required.			
			若不能满足上式, 则齿轮箱需外加辅助冷却装置, 敬请垂询	if P ₁ > P _G auxiliary cooling devices should be installed. Consult BONEENG if required.			
14	确定润滑方式 Determination of lubrication system		详见 P54、55 页 润滑方式 For details about lubrication system, see P54、55.				
15	按型号表示方法确定各项 Determination of every item included in the Type Designation		型号表示方法见 P For details about Type Designation, see P1.				

* 峰值扭矩: 最大负载扭矩, 是指启动、制动或最大脉动载荷所引起的最大扭矩。般工况条件下峰值扭矩为启动或制动时的最大扭矩)
 * Peak torque: max. load torque, which means max. torque due to be caused from starting, braking or max. pulsating load. (Generally, it refers to peak starting or braking torque.)

选型举例
Type Selection and Example
原动机

电机功率: 90kW
 电机转速: n₁=1000r/min
 最大启动扭矩: 2000N.m
 (由用户提供数据, 如果无法提供则按电机额定扭矩的 1.6 倍估算)

Prime mover

Motor Power: 90kW
 Motor Speed: n₁=1000r/min
 Max. starting torque: 2000N.m
 (This value is usually provided by users. If not available, it is routine to calculate by 1.6 times of nominal torque of electric motor.)

被驱动设备 (工作机)

设备名称: 斗式输送机
 设备转速: 12.5r/min
 输出扭矩: 68000N.m
 工作制: 12 小时
 每小时启动次数: 大于 3 次
 每小时工作周期: 60%
 环境温度: 20℃
 安装空间: 室外安装
 海拔高度: 1000 米以下

Driven machine

Name: bucket conveyor
 Speed: 12.5r/min
 Output torque: 68000N.m
 Duty: 12h/d
 Starts per hour: > 3 times
 Operating cycle per hour: 60%
 Ambient temperature: 20℃
 Place of installation: in the open
 Altitude: below 1000m

齿轮箱要求

平行轴输入, 实心轴普通平键输出,
 输入轴向下, 安装方位 B53;

Gear Unit

Parallel input shafts, solid output shaft with parallel keys, input shaft facing downwards, mounting position B53

选型步骤
Selection steps
1. 确定齿轮箱类型

1.1 确定传动比: i = n₁/n₂ = 1000/12.5 = 80
 1.2 确定齿轮箱类型: 根据速比及输入、输出轴要求, 可选: P2SB..-B53

1. Determination of gearbox type

1.1 Calculation of the ratio: i = n₁/n₂ = 1000/12.5 = 80
 1.2 Selection of gearbox type: P2SB..-B53 selected (as per the ratio, input and output shafts).

2. 确定齿轮箱规格

2.1 确定齿轮箱的额定功率:
 P₁ = T₂ · n₁ / (9550 · i · η)
 查表 P5 传动效率表, η = 0.93
 P₁ = T₂ · n₁ / (9550 · i · η) = 68000 × 1000 / (9550 × 80 × 0.93) = 95.7kW
 P_{1N} ≥ P₁ · f₁ · f₂ · S_F
 P₇ f₁ = 1.5, P₅ f₂ = 1, P₈ S_F = 1
 P_{1N} ≥ P₁ · f₁ · f₂ = 95.7 × 1.5 × 1 × 1 = 143.6kW
 根据传动能力表确定型号: P2SB14-80-B53
 查得 P_{1N} = 149kW i_{ex} = 78.8

2. Determination of gearbox size

2.1 Calculation of the nominal power of gearbox: P₁ = T₂ · n₁ / (9550 · i · η)
 In the table of transmission capacity on P5, η = 0.93
 P_{1N} = T₂ · n₁ / (9550 · i · η) = 68000 × 1000 / (9550 × 80 × 0.93) = 95.7kW
 P_{1N} ≥ P₁ · f₁ · f₂ · S_F

2.2 校核: 3.33 × 95.7 = 318.681 ≥ P_{1N}
 满足要求
 2.3 峰值扭矩校核: P_{1N} = 149kW ≥ T · n₁ · f₃ / 9550 = 2000 × 1000 × 0.5 / 9550 = 104.71kW 满足要求

P_{1N} = T₂ · n₁ / (9550 · i · η) = 68000 × 1000 / (9550 × 80 × 0.93) = 95.7kW
 P_{1N} ≥ P₁ · f₁ · f₂ · S_F
 See P7, f₁ = 1.5, and P5 f₂ = 1, P₈, S_F = 1
 P_{1N} ≥ P₁ · f₁ · f₂ = 95.7 × 1.5 × 1 × 1 = 143.6kW
 Selected from the table of transmission capacity: P2SB14-80-B53, where P_{1N} = 149kW
 i_{ex} = 78.8

2.2 Check 3.33 × 95.7 = 318.681 ≥ P_{1N}, satisfied.
 2.3 Check of peak torque P_{1N} = 149kW ≥ T · n₁ · f₃ / 9550 = 2000 × 1000 × 0.5 / 9550 = 104.71kW, satisfied.

3. 校核热容量

公称功率利用率 = P₁ / P_{1N} = 95.7 / 149 = 0.642 = 64.2%
 查 P 系列选型表得 f₁₄ = 0.9 f_t = 1.16
 P_{G1} × f_t × f₁₄ = 94 × 1.16 × 0.9 = 100.32kW > P₁ 因此无须外加辅助冷却装置就可满足设备要求。
 润滑方式: 浸油润滑

3. Check of thermal capacity
 Nominal power utilization = P₁ / P_{1N} = 95.7 / 149 = 0.642 = 64.2% So f₁₄ = 0.9 f_t = 1.16
 P_{G1} × f_t × f₁₄ = 94 × 1.16 × 0.9 = 100.32kW > P₁ So no auxiliary cooling device is needed
 Lubrication: Dip

4. 确定型号: P2SB14-80-B53
4. The type selected: P2SB14-80-B53

6 服务系数
6 Service Factors

表 1	Table 1	被驱动设备系数 Factor for driven machine		
被驱动设备	Driven machines	日带载运行时间 Effective daily operating period under load in hours		
		≤2	> 2-10	> 10
污水处理		Waste water treatment		
浓缩器 (中心传动)	Thickeners (central drive)	-	-	1.2
压滤器	Filter presses	1.0	1.3	1.5
絮凝器	Flocculation apparatus	0.8	1.0	1.3
曝气机	Aerators	-	1.8	2.0
接集设备	Raking equipment	1.0		
纵向、回转组合式接集装置	Combined longitudinal and rotary rakes	1.0	1.3	1.5
浓缩器	Pre-thickeners	-	1.1	1.3
螺杆泵	Screw pumps	-	1.3	1.5
水轮机泵	Water turbines Pumps	-	-	2.0
离心泵	Centrifugal pumps	1.0	1.2	1.3
容积式泵	Positive-displacement pumps			
1 个活塞	1 piston	1.3	1.4	1.8
>1 个活塞	> 1piston	1.2	1.4	1.5
挖泥机		Dredgers		
斗式运输机	Bucket conveyors	-	1.6	1.6
倾卸装置	Dumping devices	-	1.3	1.5
履带式行走机构	Caterpillar travelling gears	1.2	1.6	1.8
斗式挖掘机	Bucket wheel excavators			
用于捡拾	as pick-up	-	1.7	1.7
用于粗料	for primitive material	-	2.2	2.2
切碎机	Cutter heads	-	2.2	2.2
行走机构 *	Traversing gears*	-	1.4	1.8
弯板机	Plate bending machines	-	1.0	1.0
化学工业		Chemical industry		
挤出机	Extruders	-	-	1.6
调浆机	Dough mills	-	1.8	1.8
橡胶研光机	Rubber calenders	-	1.5	1.5
冷却圆筒	Cooling drums	-	1.3	1.4
混料机, 用于	Mixers for			
均匀介质	uniform media	1.0	1.3	1.4
非均匀介质	non-uniform media	1.4	1.6	1.7
搅拌机, 用于	Agitators for media with			
密度均匀介质	uniform density	1.0	1.3	1.5
不均匀介质	non-uniform density	1.2	1.4	1.6
不均匀气体吸收	non-uniform gas absorption	1.4	1.6	1.8
烘炉	Toasters	1.0	1.3	1.5
离心机	Centrifuges	1.0	1.2	1.3
金属加工设备		Metal working mills		
翻板机	Plate tilters	1.0	1.0	1.2
推钢机	Ingot pushers	1.0	1.2	1.2
绕线机	Winding machines	-	1.6	1.6
冷床横移架	Cooling bed transfer frames	-	1.5	1.5
辊式矫直机	Roller straighteners	-	1.6	1.6
辊道	Roller tables			
连续式	continuous	-	1.5	1.5
间歇式	intermittent	-	2.0	2.0
可逆式轧管机	Reversing tube mills	-	1.8	1.8
剪切机	Shears			
连续式 *	continuous*	-	1.5	1.5
曲柄式 *	crank type*	1.0	1.0	1.0
连铸机驱动装置	Continuous casting drivers	-	1.4	1.4
轧机	Rolls			
可逆式开坯机	Reversing blooming mills	-	2.5	2.5
可逆式板坯轧机	Reversing slabbing mills	-	2.5	2.5
可逆式线材轧机	Reversing wire mills	-	1.8	1.8

表 1	Table 1	被驱动设备系数 Factor for driven machine		
被驱动设备	Driven machines	日带载运行时间 Effective daily operating period under load in hours		
		≤2	> 2-10	> 10
金属加工设备		Metal working mills		
轧机		Rolls		
可逆式薄板轧机	Reversing sheet mills	-	2.0	2.0
可逆式中厚板轧机	Reversing plate mills	-	1.8	1.8
辊缝调节驱动装置	Roll adjustment drives	0.9	1.0	-
输送机械		Conveyors		
斗式输送机	Bucket conveyors	-	1.4	1.5
绞车	Hauling winches	1.4	1.6	1.6
卷扬机	Hoists	-	1.5	1.8
皮带输送机 ≤ 150kW	Belt conveyors ≤ 150kW	1.0	1.2	1.3
皮带输送机 ≥ 150kW	Belt conveyors ≥ 150kW	1.1	1.3	1.4
货用电梯 *	Goods lifts*	-	1.2	1.5
客用电梯 *	Passenger lifts*	-	1.5	1.8
刮板式输送机	Apron conveyors	-	1.2	1.5
自动扶梯	Escalators	1.0	1.2	1.4
轨道行走机构	Rail travelling gears	-	1.5	-
变频装置	Frequency converters	-	1.8	2.0
往复式压缩机	Reciprocating compressors	-	1.8	1.9
起重机械 **	Cranes**			
回转机构 *	Slewing gears*	-	1.4	1.8
俯仰机构	Luffing gears	-	1.1	1.4
行走机构	Travelling gears	-	1.6	2.0
提升机构	Hoisting gears	-	1.1	1.4
转臂式起重机	Derricking jib cranes	-	1.2	1.6
冷却塔	Cooling towers			
冷却塔风扇	Cooling tower fans	-	-	2.0
风机 (轴流和离心式)	Blowers (axial and radial)	-	1.4	1.5
食品工业		Food industry		
蔗糖生产		Cane sugar production		
甘蔗切碎机 *	Cane knives	-	-	1.7
甘蔗碾磨机	Cane mills	-	-	1.7
甜菜糖生产		Beet sugar production		
甜菜绞碎机	Beet cosettes macerators,-	-	-	1.2
榨取机, 机械制	Extraction plants, Technical			
冷机、蒸煮机	refrigerators, Juice boilers,-	-	-	1.4
甜菜清洗机	Sugar beet washing machines,-			
甜菜切碎机	Sugar beet cutters	-	-	1.5
造纸机械		Paper machines		
各种类型 ***	of all-kind***	-	1.4	1.8
碎浆机驱动装置	Pulper drives		On request	
离心式压缩机	Centrifugal compressors	-	1.4	1.5
索道缆车		Cableways		
运货索道	Material ropeways	-	1.3	1.4
往返系统空中索道	To- and fro system aerial ropeways	-	1.6	1.8
T 型杆升降机	T-bar lifts	-	1.3	1.4
连续索道	Continuous ropeways	-	1.4	1.6
水泥工业		Cement industry		
混凝土搅拌机	Concrete mixers	-	1.5	1.5
破碎机 *	Breakers*	-	1.2	1.4
回转窑	Rotary kilns	-	-	2.0
管式磨机	Tube mills	-	-	2.0
选粉机	Separators	-	1.6	1.6
辊压机	Roll crushers	-	-	2.0

表 1
Table 1

 被驱动设备系数
 日带载运行时间
 Factor for driven machine
 Effective daily operating period under load in hours

被驱动设备	Driven machines	≤ 2	> 2-10	> 10
木材工业	Wood industry			
剥皮机	Bark peeler			
进给传动	Feed drive	1.25	1.25	1.50
主传动	Main drive	1.75	1.75	1.75
运送机	Transporter			
燃烧器、反复锯、转塔式、转运输送	Burner, band saw, turret lathe, transportation	1.25	1.25	1.50
主要载荷、重载	mainly heavy load	1.50	1.50	1.50
主原木、地坯	mainly raw log	1.75	1.75	2.00
输送链	Conveyor chain			
地板	Parquet	1.50	1.50	1.50
生材	Unprocessed materials	1.50	1.50	1.75
切割链	Cutting chain			
锯传动、牵引	Saw drive and traction	1.50	1.50	1.75
剥皮筒	Barking drum	1.75	1.75	2.00
进给传动	Feed drive			
轧边、修木、刨床进给、分类台、自动倾斜升降	Edge banding, wood sanding Planer feeding, sorter Automatic inclination and lift	1.25	1.25	1.50
多轴送进、原木搬运和旋转	Multi-spindle feeding Log transport and turning	1.75	1.75	1.75
搬运	Transport			
料盘、胶合板车床传动、输送链、起重式	Delivery plate Plywood lathe drive Conveyor chain, crane type	1.50	1.50	1.75
塑料工业	Plastic industry			
碾磨机、复式磨、涂料、涂膜、输送管、拉杆、薄型	Grinding mill, compound mill Coating and film coating Pipe, pull rod, thin plastic manufacture	1.25	1.25	1.25
管型、拔桩机	Tube, pile drawer accessories	1.25	1.25	1.50
连续混合机、压延机、吹膜、欲塑化	Continuous mixer, calender Film blower, plasticizer	1.50	1.50	1.50
分批混合机	Batch mixer	1.75	1.75	1.75
橡胶工业	Rubber industry			
连续式强力内式拌合机、混合轧机、分批下料碾磨机、(双光棍式除外) 精炼机、压延机	Continuous powerful internal stirrer Roller mixer, batch charger Crusher(except double rolls) Refiner, calender	1.50	1.50	1.50
双棍式夹持进给及混合碾磨机	Double-roller clamp feeding Mixer grinder	1.25	1.25	1.50
分批式强力内式拌合机、双光棍式单槽纹棍碾磨机加热器、双光棍式	Batch powerful internal stirrer, Double roll single groove roller grinder, Crusher heater, double rolls, Batch charging grinder	1.75	1.75	1.75
分批下料碾磨机 波形棍式碾磨机	Wave roll crusher	2.00	2.00	2.00
发电机和励磁机	Generator and Exciter	1.00	1.00	1.25
锤式破碎机	Hammer crusher	1.75	1.75	2.00
砂碾机	Sand roller	1.25	1.25	1.50

1. 工作机额定功率 P₂ 的确定:

- *) 按最大的扭矩确定额定功率。
 - **) 实际的服务系数应根据准确的载荷分类进行选择, 具体可咨询我司。
 - ***) 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, 请及时与我们取得联系。
3. 对于那些未列入此表的工作机械, 请与我们联系。

1. Determination of nominal power of driven machine

- *) The normal power usually corresponds to max. torque
 - **) The actual service factors should comply with the actually classs.
 - ***) A check for thermal capacity is absolutely necessary.
- For more details, please consult us.
2. The factors listed above are empirical values only. Prerequisite for their applications is that the machinery and equipment correspond to generally accepted design and load specifications. In case of deviations, please consult us.
3. For driven machines not listed in the table, please consult us.

表 2 齿轮箱可靠度系数
Table 3 Factor for gearbox reliability

一般设备, 齿轮箱失效后仅仅引起单机停产, 并且更换零部件比较容易, 损失较小	Ordinary: single machine halts when gearbox fail, easy to replace spare parts and minor loss occurred.	1.0 ≤ SF ≤ 1.3
重要设备, 齿轮箱失效后使生产线或者全厂停工, 停机事故损失比较大	Important: a product line or an entire plant halts when gearbox fail, heavy loss.	1.3 < SF ≤ 1.5
高可靠度要求, 齿轮箱失效后可能造成重大停产事故, 造成极大的经济损失, 以及人身生命事故	Highly reliable: severe production problem happens when gearbox fail, enormous loss and life injuries.	1.5 < SF

表 3 环境温度系数
Table 3 Thermal Factor

环境温度 Ambient Temperature	每小时工作周期 (ED) 百分比 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

7.2 P3N.. 和 P3S..(i=140-900)

7.2 P3N.. and P3S..(i=140-900)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P3..09			P3..10			P3..11			P3..12			P3..13			P3..14			
			T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	
145	140	0.4	22	146	22.8	31	146	21.2	42	147	22.7	60	142	21.2	83	142	21.2	117	142	21.2	124
960	6.9	140	22	146	85.1	31	146	11.1	42	147	21.2	60	142	31.4	83	142	43.2	117	142	60.9	124
710	5.1	140	22	146	11.1	31	146	15.7	42	147	21.2	60	142	31.4	83	142	43.2	117	142	60.9	124
145	160	0.1	22	165	20.1	31	165	18.9	42	165	25.5	60	159	27.9	83	161	38.2	117	161	53.8	110
960	6.0	160	22	165	93.3	31	165	9.9	42	165	13.9	60	159	27.9	83	161	38.2	117	161	53.8	110
710	4.4	160	22	165	9.9	31	165	13.9	42	165	18.9	60	159	27.9	83	161	38.2	117	161	53.8	110
145	180	0.1	22	192	17.4	31	192	16.4	42	189	22.2	60	183	24.3	83	187	33.0	117	187	46.5	110
960	5.3	180	22	192	21.5	31	192	8.5	42	189	22.2	60	183	24.3	83	187	33.0	117	187	46.5	110
710	3.9	180	22	192	8.5	31	192	12.0	42	189	22.2	60	183	24.3	83	187	33.0	117	187	46.5	110
145	200	0.3	22	210	15.9	31	210	15.0	42	207	20.3	60	200	20.0	83	204	20.7	117	204	28.4	110
960	4.8	200	22	210	40.5	31	210	7.8	42	207	20.3	60	200	20.0	83	204	20.7	117	204	28.4	110
710	3.6	200	22	210	7.8	31	210	11.0	42	207	20.3	60	200	20.0	83	204	20.7	117	204	28.4	110
145	225	0.4	22	233	14.3	31	233	14.3	42	230	18.3	60	222	18.1	83	227	18.1	117	227	27.1	110
960	4.3	225	22	233	59.7	31	233	7.0	42	230	18.3	60	222	18.1	83	227	18.1	117	227	27.1	110
710	3.2	225	22	233	7.0	31	233	9.9	42	230	18.3	60	222	18.1	83	227	18.1	117	227	27.1	110
145	250	0.8	22	264	12.7	31	264	12.7	42	260	16.2	60	251	17.7	83	257	17.7	117	257	17.7	110
960	3.8	250	22	264	81.4	31	264	6.2	42	260	16.2	60	251	17.7	83	257	17.7	117	257	17.7	110
710	2.8	250	22	264	6.2	31	264	8.7	42	260	16.2	60	251	17.7	83	257	17.7	117	257	17.7	110
145	280	0.2	22	305	10.9	31	305	10.3	42	302	14.0	60	291	15.3	83	297	15.3	117	297	15.3	110
960	3.4	280	22	305	87.6	31	305	5.3	42	302	14.0	60	291	15.3	83	297	15.3	117	297	15.3	110
710	2.5	280	22	305	5.3	31	305	7.5	42	302	14.0	60	291	15.3	83	297	15.3	117	297	15.3	110
145	280	0.2	22	295	11.3	31	295	10.6	42	295	14.3	60	285	15.6	83	287	15.6	117	287	15.6	110
960	3.4	280	22	295	271.5	31	295	5.5	42	295	14.3	60	285	15.6	83	287	15.6	117	287	15.6	110
710	2.5	280	22	295	5.5	31	295	7.8	42	295	14.3	60	285	15.6	83	287	15.6	117	287	15.6	110
145	315	0.6	22	333	10.0	31	333	9.4	42	332	12.7	60	320	13.9	83	324	13.9	117	324	13.9	110
960	3.0	315	22	333	68.6	31	333	4.9	42	332	12.7	60	320	13.9	83	324	13.9	117	324	13.9	110
710	2.3	315	22	333	4.9	31	333	6.9	42	332	12.7	60	320	13.9	83	324	13.9	117	324	13.9	110
145	355	0.1	22	386	8.6	31	386	8.2	42	382	11.1	60	368	12.1	83	376	12.1	117	376	12.1	110
960	2.7	355	22	386	58.7	31	386	4.2	42	382	11.1	60	368	12.1	83	376	12.1	117	376	12.1	110
710	2.0	355	22	386	4.2	31	386	6.0	42	382	11.1	60	368	12.1	83	376	12.1	117	376	12.1	110
145	400	0.6	22	401	8.3	31	401	7.8	42	399	10.6	60	385	11.6	83	390	11.6	117	390	11.6	110
960	2.4	400	22	401	57.5	31	401	4.1	42	399	10.6	60	385	11.6	83	390	11.6	117	390	11.6	110
710	1.8	400	22	401	4.1	31	401	5.7	42	399	10.6	60	385	11.6	83	390	11.6	117	390	11.6	110
145	450	0.2	22	464	7.2	31	464	6.8	42	459	9.8	60	443	10.1	83	452	10.1	117	452	10.1	110
960	2.1	450	22	464	64.8	31	464	3.5	42	459	9.8	60	443	10.1	83	452	10.1	117	452	10.1	110
710	1.6	450	22	464	3.5	31	464	5.0	42	459	9.8	60	443	10.1	83	452	10.1	117	452	10.1	110
145	500	0.9	22	510	6.6	31	510	6.1	42	508	8.5	60	490	9.1	83	496	9.1	117	496	9.1	110
960	1.9	500	22	510	41.3	31	510	3.2	42	508	8.5	60	490	9.1	83	496	9.1	117	496	9.1	110
710	1.4	500	22	510	3.2	31	510	4.5	42	508	8.5	60	490	9.1	83	496	9.1	117	496	9.1	110
145	560	0.6	22	590	5.7	31	590	5.3	42	583	7.2	60	563	7.9	83	575	7.9	117	575	7.9	110
960	1.7	560	22	590	87.7	31	590	2.8	42	583	7.2	60	563	7.9	83	575	7.9	117	575	7.9	110
710	1.3	560	22	590	2.8	31	590	3.9	42	583	7.2	60	563	7.9	83	575	7.9	117	575	7.9	110
145	630	0.3	22	645	5.2	31	645	4.9	42	643	6.3	60	621	7.2	83	628	7.2	117	628	7.2	110
960	1.5	630	22	645	63.4	31	645	2.5	42	643	6.3	60	621	7.2	83	628	7.2	117	628	7.2	110
710	1.1	630	22	645	2.5	31	645	3.6	42	643	6.3	60	621	7.2	83	628	7.2	117	628	7.2	110
145	710	0.2	22	748	4.5	31	748	4.2	42	739	5.6	60	713	6.3	83	728	6.3	117	728	6.3	110
960	1.4	710	22	748	31.0	31	748	2.2	42	739	5.6	60	713	6.3	83	728	6.3	117	728	6.3	110
710	1.0	710	22	748	2.2	31	748	3.1	42	739	5.6	60	713	6.3	83	728	6.3	117	728	6.3	110
145	800	0.8	22	807	4.1	31	807	3.9	42	798	5.0	60	770	5.8	83	786	5.8	117	786	5.8	110
960	1.2	800	22	807	52.7	31	807	2.0	42	798	5.0	60	770	5.8	83	786	5.8	117	786	5.8	110
710	0.9	800	22	807	2.0	31	807	2.9	42	798	5.0	60	770	5.8	83	786	5.8	117	786	5.8	110
145	900	0.6	22	935	3.6	31	935	3.4	42	924	4.6	60	892	5.0	83	910	5.0	117	910	5.0	110
960	1.1	900	22	935	27.4	31	935	1.7	42	924	4.6	60	892	5.0	83	910	5.0	117	910	5.0	110
710	0.8	900	22	935	1.7	31	935	2.5	42	924	4.6	60	892	5.0	83	910	5.0	117	910	5.0	110

P3..16	P3..17	P3..18	P3..19	P3..20	P3..21	P3..22	i _N	n _{2N} (r/min)	n ₁ (r/min)															
										T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)			
160	143.08	170	202	143.08	214	224	142.94	172.295	152.47	195354	152.47	294	353	390	152.47	294	353	390	152.47	294	353	390	10.4	1450
160	161.73	150	202	161.73	190	244	161.57	152295	172.34	172354	172.34	260	312	345	172.34	260	312	345	172.34	260	312	345	9.1	1450
160	187.37	130	202	187.37	164	244	187.19	131295	199.66	149354	199.66	224	269	298	199.66	224	269	298	199.66	224	269	298	8.1	1450
160	204.45	119	202	204.45	150	244	204.88	120295	218.54	136354	218.54	205	246	272	218.54	205	246	272	218.54	205	246	272	7.3	1450
160	225.98	108	202	225.98	136	244	227.41	108295	242.57	122354	242.57	147	185	222	242.57	147	185	222	242.57	147	185	222	6.4	1450
160	253.97	96	202	253.97	121	244	257.04	95295	274.18	108354	274.18	130	163	196	274.18	130	163	196	274.18	130	163	196	5.8	1450
160	291.84	83	202	291.84	105	244	297.79																	

7.3 P2L.. (i=31.5-100)

7.3 P2L.. (i=31.5-100)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P2..07			P2..08			P2..09			P2..10			P2..11			P2..12			P2..13		
			T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)
1450	46.0				49			73			103			145			194			287			398
960	30.5	31.5	10	31.231	32	15	31.231	48	22	32.5353	68	31	32.5353	96	42	32.8413	129	60	31.7089	190	83	31.6775	263
710	22.5				24			36			50			71			95			141			195
1450	40.8				45			67			94			132			178			263			364
960	27.0	35.5	10	34.073	30	15	34.073	44	22	35.6114	62	31	35.6114	88	42	35.8344	118	60	34.5987	174	83	34.6723	241
710	20.0				22			33			46			65			87			129			178
1450	36.3				40			60			85			119			161			238			327
960	24.0	40	10	37.662	27	15	37.662	40	22	39.5264	56	31	39.5264	79	42	39.6083	107	60	38.2424	158	83	38.4842	217
710	17.8				20			30			41			58			79			117			160
1450	32.2				36			54			76			107			147			217			299
960	21.3	45	10	42.456	24	15	42.456	36	22	43.882	50	31	43.882	71	42	43.4177	97	60	41.9206	144	83	42.1856	198
710	15.8				18			26			37			53			72			106			146
1450	29.0				34			50			66			93			126			187			257
960	19.2	50	10	45.195	22	15	45.195	33	22	50.4204	44	31	50.4204	62	42	50.5248	84	60	48.7826	124	83	49.0910	170
710	14.2				16			25			32			46			62			91			126
1450	25.9				29			43			60			84			114			169			232
960	17.1	56	10	53.17	19	15	53.17	28	22	55.7278	40	31	55.7278	56	42	55.8432	76	60	53.9176	112	83	54.2585	154
710	12.7				14			21			29			41			56			83			114
1450	23.0				25			38			55			78			105			156			202
960	15.2	63	10	60.26	17	15	60.26	25	22	60.4521	37	31	60.4521	51	42	60.5773	70	60	58.4884	103	83	62.3263	134
710	11.3				12			19			27			38			52			76			99
1450	20.4				23			34			48			68			91			135			186
960	13.5	71	10	66.285	15	15	66.285	23	22	69.6115	32	31	69.6115	45	42	69.7557	61	60	67.3503	90	83	67.7761	123
710	10.0				11			17			23			33			45			66			91
1450	18.1				20			30			42			60			79			118			162
960	12.0	80	10	76.483	13	15	76.483	20	22	79.0528	28	31	79.0528	39	42	80.2465	53	60	77.477	78	83	77.968	107
710	8.9				10			15			21			29			39			58			79
1450	16.1				18			27			39			55			74			109			150
960	10.7	90	10	82.857	12	15	82.857	18	22	86.2394	26	31	86.2394	36	42	86.418	49	60	83.438	72	83	83.9656	99
710	7.9				9			13			19			27			36			53			74
1450	14.5				16			24			34			48			64			95			131
960	9.6	100	10	93.402	11	15	93.402	16	22	99.088	22	31	99.088	31	42	99.295	43	60	95.868	63	83	96.476	86
710	7.1				8			12			17			23			31			47			64

P2..14			P2..16			P2..17			P2..18			P2..19			i _N	n _{2N} (r/min)	n ₁ (r/min)
T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)			
		561			773			976			1179			1336		46.0	1450
117	31.6775	371	160	31.4135	512	202	31.4135	646	244	31.4286	781	295	33.5237	885	31.5	30.5	960
		275			379			478			577			654		22.5	710
		512			707			892			1077			1221		40.8	1450
117	34.6723	339	160	34.3835	468	202	34.3835	591	244	34.3999	713	295	36.6933	808	35.5	27.0	960
		251			346			437			527			598		20.0	710
		462			637			804			970			1100		36.3	1450
117	38.4842	306	160	38.1635	421	202	38.1635	532	244	38.1819	642	295	40.7272	728	40	24.0	960
		226			312			394			475			539		17.8	710
		421			581			733			859			973		32.2	1450
117	42.1856	279	160	41.834	385	202	41.834	485	244	43.149	569	295	46.0254	644	45	21.3	960
		206			284			359			420			477		15.8	710
		362			499			630			755			855		29.0	1450
117	49.091	240	160	48.6818	330	202	48.6818	417	244	49.091	500	295	52.3636	566	50	19.2	960
		177			244			309			370			419		14.2	710
		327			452			570			674			765		25.9	1450
117	54.2585	217	160	53.8063	299	202	53.8063	377	244	54.8664	446	295	58.524	507	56	17.1	960
		160			221			279			330			375		12.7	710
		285			393			496			594			674		23.0	1450
117	62.3263	189	160	61.8069	260	202	61.8069	329	244	62.3263	394	295	66.4812	446	63	15.2	960
		140			192			243			291			330		11.3	710
		262			361			456			547			620		20.4	1450
117	67.7761	174	160	67.2113	239	202	67.2113	302	244	67.7761	362	295	72.2943	410	71	13.5	960
		128			177			223			268			303		10.0	710
		228			314			397			475			539		18.1	1450
117	77.968	151	160	77.318	208	202	77.318	263	244	77.968	315	295	83.165	357	80	12.0	960
		112			154			194			233			264		8.9	710
		212			292			368			441			500		16.1	1450
117	83.9656	140	160	83.2658	193	202	83.2658	244	244	83.9656	292	295	89.563	331	90	10.7	960
		104			143			180			216			245		7.9	710
		184			254			321			384			435		14.5	1450
117	96.476	122	160	95.671	168	202	95.671	212	244	96.476	254	295	102.906	288	100	9.6	960
		90			124			157			188			213		7.1	710

 注: 必需采用强制润滑。

 Note Forced lubrication required.

P2L.. (i=31.5-100)(续)

P2L.. (i=31.5-100)(continued)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P2..20			P2..21			P2..22			P2..23			P2..24			P2..25								
			T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)						
1450	46.0	31.5	354	33.5237	1603	392	33.5237	1176	450	33.5237	1350	513	33.8391	1524	592	33.8391	1759	684	33.8391	2032						
960	30.5				1062																869	998	1127	1301	1503	
710	22.5				785																646	716	822	935	1079	1246
1450	40.8	35.5	354	36.6933	1465	392	36.6933	1074	450	36.6933	1233	513	36.9231	1397	592	36.9231	1612	684	36.9231	1862						
960	27.0				970																794	912	1033	1192	1377	
710	20.0				717																557	639	727	839	969	
1450	36.3	40	354	40.7272	1320	392	40.7272	968	450	40.7272	1111	513	40.8116	1264	592	40.8116	1458	684	40.8116	1685						
960	24.0				874																716	822	935	1079	1246	
710	17.8				646																557	639	727	839	969	
1450	32.2	45	354	46.0254	1168	392	46.0254	856	450	46.0254	983	513	46.1208	1118	592	46.1208	1290	684	46.1208	1491						
960	21.3				773																633	727	827	954	1103	
710	15.8				572																498	572	650	751	867	
1450	29.0	50	354	52.3636	1027	392	52.3636	753	450	52.3636	864	513	52.472	983	592	52.472	1134	684	52.1365	1311						
960	19.2				680																557	639	727	839	969	
710	14.2				503																498	572	650	751	867	
1450	25.9	56	354	58.524	919	392	58.524	673	450	58.524	773	513	58.6452	879	592	58.6452	1015	684	58.6452	1173						
960	17.1				608																498	572	650	751	867	
710	12.7				450																498	572	650	751	867	
1450	23.0	63	354	66.4812	809	392	66.4812	593	450	66.4812	680	513	66.6189	774	592	66.6189	893	684	66.6189	1032						
960	15.2				535																438	503	573	661	763	
710	11.3				396																438	503	573	661	763	
1450	20.4	71	354	72.2943	744	392	72.2943	545	450	72.2943	626	513	72.4441	712	592	72.4441	822	684	72.4441	949						
960	13.5				492																403	463	527	608	702	
710	10.0				364																403	463	527	608	702	
1450	18.1	80	354	83.165	646	392	83.165	474	450	83.165	544	513	83.337	620	592	83.337	714	684	83.337	825						
960	12.0				428																316	350	402	459	528	610
710	8.9				316																316	350	402	459	528	610
1450	16.1	90	354	89.563	600	392	89.563	440	450	89.563	505	513	89.7486	575	592	89.7486	663	684	89.7486	766						
960	10.7				397																294	325	374	425	490	567
710	7.9				294																294	325	374	425	490	567
1450	14.5	100	354	102.904	522	392	102.904	383	450	102.904	440	513	103.1195	500	592	103.1195	577	684	103.1195	667						
960	9.6				346																256	283	325	370	427	493
710	7.1				256																256	283	325	370	427	493

 注: 必需采用强制润滑。

 Note Forced lubrication required.

P2..26		P2..27			P2..28			P2..29			P2..30			P2..31			P2..36			i _N	n _{2N} (r/min)	n ₁ (r/min)	
T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)						
763	33.8391	3424	852	33.5237	3859	950	33.5237	4303	1060	33.5237	4801	1200	33.5237	5435	1200	33.5237	3599	1200	33.5237	2662	31.5	46.0	1450
		2267			2555			2849			2107			2351			2662						
		1677			1890			2107			2351			2662									
763	36.9231	3138	852	36.6933	3526	950	36.6933	3931	1060	36.6933	4387	1200	36.6933	4966	1200	36.6933	3288	1200	36.6933	2432	35.5	40.8	1450
		2077			2334			2603			2148			2432									
		1536			1726			1925			2148			2432									
763	40.8116	2839	852	40.7272	3177	950	40.7272	3542	1060	40.7272	3952	1200	40.7272	4474	1200	40.7272	2962	1200	40.7272	2191	40	36.3	1450
		1880			2103			2345			1734			1935			2191						
		1390			1555			1734			1935			2191									
763	46.1208	2512	852	46.0254	2811	950	46.0254	3134	1060	46.0254	3497	1200	46.0254	3959	1200	46.0254	2621	1200	46.0254	1939	45	32.2	1450
		1663			1861			2075			1535			1712			1939						
		1230			1376			1535			1712			1939									
763	52.1365	2208	852	52.0288	2471	950	52.0288	2755	1060	52.0288	3074	1200	52.0288	3480	1200	52.0288	2304	1200	52.0288	1704	50	29.0	1450
		1462			1636			1824			1349			1505			1704						
		1081			1210			1349			1505			1704									
763	58.6452	1976	852	58.524	2211	950	58.524	2465	1060	58.524	2750	1200	58.524	3114	1200	58.524	2061	1200	58.524	1525	56	25.9	1450
		1308			1464			1632			1207			1347			1525						
		967			1082			1207			1347			1525									
763	66.6189	1739	852	66.4812	1946	950	66.4812	2170	1060	66.4812	2421	1200	66.4812	2741	1200	66.4812	1815	1200	66.4812	1342	63	23.0	1450
		1151			1288			1437			1062			1186			1342						
		852			953			1062			1186			1342									
763	72.4441	1599	852	72.2943	1790	950	72.2943	1995	1060	72.2943	2226	1200	72.2943	2521	1200	72.2943	1669	1200	72.2943	1234	71	20.4	1450
		1059			1185			1321			977			1090			1234						
		783			876			977			1090			1234									
763	83.337	1390	852	83.165	1556	950	83.165	1735	1060	83.165	1935	1200	83.165	2191	1200	83.165	1451	1200	83.165	1073	80	18.1	1450
		920			1030			1148			849			948			1073						
		680			762			849			948			1073									
763	89.7486	1291	852	89.563	1445	950	89.563	1611	1060	89.563	1797	1200	89.563	2035	1200	89.563	1347	1200	89.563	996	90	16.1	1450
		855			956			1066			789			880			996						
		632			707			789			880			996									
763	103.1195	1124	852	102.904	1257	950	102.904	1402	1060	102.904	1564	1200	102.904	1771	1200	102.904	1172	1200	102.904	867	100	14.5	1450
		744			832			928			766			867									
		550			616			686			766			867									

 注: 必需采用强制润滑。

 Note Forced lubrication required.

7.4 P2K.. (i=112-560)

7.4 P2K.. (i=112-560)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P2..07			P2..08			P2..09			P2..10			P2..11			P2..12			P2..13			P2..14		
			T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)
1450	12.9				14			21			30			42			57			84			117			165
960	8.6	112	10	107.04	9.4	15	107.04	14	22	111.25	20	31	111.25	28	42	111.83	38	60	107.97	56	83	107.97	77	117	107.76	109
710	6.3				6.9			10			15			21			28			41			57			81
1450	11.6				13			19			27			37			51			75			104			146
960	7.7	125	10	120.30	8.4	15	120.30	13	22	125.75	18	31	125.75	25	42	125.68	34	60	121.35	50	83	121.8	69	117	121.8	97
710	5.7				6.2			9.3			13			18			25			37			51			71
1450	10.4				11			16			23			32			44			65			90			126
960	6.9	140	10	138.24	7.3	15	138.24	11	22	145.69	15	31	145.69	21	42	144.42	29	60	139.44	43	83	141.11	60	117	141.11	83
710	5.1				5.4			8.1			11			16			22			32			44			62
1450	9.1				10			15			21			30			41			61			84			118
960	6.0	160	10	148.65	6.8	15	148.65	10	22	157.28	14	31	157.28	20	42	155.27	27	60	149.91	40	83	151.19	56	117	151.19	78
710	4.4				5.0			7.5			10			15			20			30			41			58
1450	8.1				9.1			14			19			27			37			54			75			106
960	5.3	180	10	167.57	6.0	15	167.57	9.0	22	175.77	13	31	175.77	18	42	173.52	24	60	167.54	36	83	167.85	50	117	167.85	70
710	3.9				4.4			6.7			9.3			13			18			27			37			52
1450	7.3				8.5			13			16			23			32			47			65			92
960	4.8	200	10	178.38	5.6	15	178.38	8.5	22	203.53	11	31	203.53	15	42	200.92	21	60	193.99	31	83	192.86	43	117	192.86	61
710	3.6				4.2			6.3			8.0			11			16			23			32			45
1450	6.4				7.2			11			15			21			29			43			59			83
960	4.3	225	10	209.86	4.8	15	209.86	7.2	22	223.22	9.9	31	223.22	14	42	220.36	19	60	212.76	28	83	213.16	39	117	213.16	55
710	3.2				3.5			5.3			7.3			10			14			21			29			41
1450	5.8				6.4			10			14			19			27			39			55			77
960	3.8	250	10	237.84	4.2	15	237.84	6.3	22	242.15	9.1	31	242.15	13	42	239.04	18	60	230.8	26	83	231.23	36	117	231.23	51
710	2.8				3.1			4.7			6.8			10			13			19			27			38
1450	5.2				5.8			8.7			12			17			23			34			47			67
960	3.4	280	10	261.62	3.8	15	261.62	5.8	22	278.84	7.9	31	278.84	11	42	275.26	15	60	265.77	23	83	266.26	31	117	266.26	44
710	2.5				2.8			4.3			5.9			8.3			11			17			23			33
1450	4.5				5.0			7.5			11			15			20			30			42			59
960	3.2	320	10	301.81	3.3	15	301.81	5.0	22	316.65	7.0	31	316.65	10	42	312.6	14	60	301.82	20	83	302.38	28	117	302.38	39
710	2.2				2.5			3.7			5.2			7.3			10			15			20			29
1450	4.0				4.6			7.0			9.7			14			19			28			38			54
960	2.7	360	10	327.02	3.1	15	327.02	4.6	22	345.44	6.4	31	345.44	9.0	42	341.01	12	60	329.25	18	83	329.86	25	117	329.86	36
710	2.0				2.3			3.4			4.7			6.7			9.2			14			19			26
1450	3.6				4.1			6.2			8.4			12			16			24			33			47
960	2.4	400	10	368.65	2.7	15	368.65	4.1	22	396.90	5.6	31	396.90	7.9	42	391.83	11	60	378.31	16	83	379.01	22	117	379.01	31
710	1.8				2.0			3.0			4.1			5.8			8.0			12			16			23
1450	3.2				3.6			5.4			7.5			11			15			22			30			42
960	2.1	450	10	422.82	2.4	15	422.82	3.6	22	443.52	5.0	31	443.52	7.0	42	437.85	10	60	422.75	14	83	423.53	20	117	423.53	28
710	1.6				1.8			2.6			3.7			5.2			7.1			11			15			21
1450	2.9				3.3			4.9			6.9			10			13.3			20			27			38
960	1.9	500	10	460.81	2.2	15	460.81	3.3	22	485.10	4.6	31	485.10	6.4	42	478.90	8.8	60	462.38	13	83	462.24	18	117	462.24	25
710	1.4				1.6			2.4			3.4			4.8			6.5			10			13			19
On request																										

P2..16			P2..17			P2..18			P2..19			P2..20			i _N	n _{2N} (r/min)	n ₁ (r/min)
T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)			
160	108.47	224	202	108.47	283	244	107.76	344	295	114.94	390	354	114.94	468	112	12.9	1450
		148			187			228			258			310		8.6	960
		110			138			168			191			229		6.3	710
160	122.6	198	202	122.6	250	244	121.8	304	295	129.92	345	354	129.92	414	125	11.6	1450
		131			166			201			228			274		7.7	960
		97			123			149			169			203		5.7	710
160	142.04	171	202	142.04	216	244	141.11	263	295	150.52	298	354	150.52	357	140	10.4	1450
		113			143			174			197			236		6.9	960
		84			106			129			146			175		5.1	710
160	153.05	159	202	153.05	200	244	151.19	245	295	161.27	278	354	161.27	333	160	9.1	1450
		105			133			162			184			221		6.0	960
		78			98			120			136			163		4.4	710
160	167.77	145	202	167.77	183	244	165.73	221	295	176.78	253	354	176.78	304	180	8.1	1450
		96			121			146			168			201		5.3	960
		71			90			108			124			149		3.9	710
160	195.23	124	202	195.23	157	244	192.86	192	295	205.71	218	354	205.71	261	200	7.3	1450
		82			104			127			144			173		4.8	960
		61			77			94			107			128		3.6	710
160	215.79	113	202	215.79	142	244	213.16	174	295	227.37	197	354	227.37	236	225	6.4	1450
		75			94			115			130			157		4.3	960
		55			70			85			96			116		3.2	710
160	234.08	104	202	234.08	131	244	244.85	160	295	261.18	172	354	261.18	206	250	5.8	1450
		69			87			106			114			136		3.8	960
		51			64			78			84			101		2.8	710
160	269.55	90	202	269.55	114	244	266.26	139	295	284.01	158	354	284.01	189	280	5.2	1450
		60			75			92			104			125		3.4	960
		44			56			68			77			93		2.5	710
160	309	79	202	309	99	244	305.24	123	295	325.59	138	354	325.59	165	320	4.5	1450
		52			66			81			91			109		3.0	9

7.5 P3K.. (i=560-4000)

7.5 P3K.. (i=560-4000)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P3..09			P3..10			P3..11			P3..12			P3..13		
			T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)
1450	2.59	560	22	566.22	5.9	31	566.22	8.3	42	567.4	11.2	60	547.83	16.6	83	551.29	22.9
960	1.71				3.9			5.5			7.4			11.0			15.1
710	1.27				2.9			4.1			5.5			8.1			11.2
1450	2.30	630	22	640.02	5.2	31	640.02	7.4	42	637.68	10.0	60	615.69	14.8	83	623.14	20.2
960	1.52				3.5			4.9			6.6			9.8			13.4
710	1.13				2.6			3.6			4.9			7.2			9.9
1450	2.04	710	22	700.53	4.8	31	700.53	6.7	42	697.96	9.1	60	673.9	13.5	83	682.06	18.5
960	1.35				3.2			4.4			6.0			9.0			12.2
710	1.00				2.3			3.3			4.5			6.6			9.0
1450	1.81	800	22	777.54	4.3	31	777.54	6.1	42	774.7	8.2	60	747.98	12.2	83	757.04	16.6
960	1.20				2.8			4.0			5.5			8.1			11.0
710	0.89				2.1			3.0			4.0			6.0			8.2
1450	1.61	900	22	878.88	3.8	31	878.88	5.4	42	875.66	7.3	60	845.46	10.7	83	855.70	14.7
960	1.07				2.5			3.5			4.8			7.1			9.8
710	0.79				1.9			2.6			3.6			5.2			7.2
1450	1.45	1000	22	982.19	3.4	31	982.19	4.8	42	978.6	6.5	60	944.85	9.6	83	956.3	13.2
960	0.96				2.3			3.2			4.3			6.4			8.7
710	0.71				1.7			2.3			3.2			4.7			6.5
1450	1.29	1120	22	1137.3	2.9	31	1137.3	4.1	42	1133.1	5.6	60	1094	8.3	83	1107.3	11.4
960	0.86				1.9			2.7			3.7			5.5			7.5
710	0.63				1.4			2.0			2.8			4.1			5.6
1450	1.16	1250	22	1247.3	2.7	31	1247.3	3.8	42	1242.8	5.1	60	1199.9	7.6	83	1214.4	10.4
960	0.77				1.8			2.5			3.4			5.0			6.9
710	0.57				1.3			1.8			2.5			3.7			5.1
1450	1.04	1400	22	1351.1	2.5	31	1351.1	3.5	42	1348.1	4.7	60	1301.6	7.0	83	1317.4	9.6
960	0.69				1.6			2.3			3.1			4.6			6.3
710	0.51				1.2			1.7			2.3			3.4			4.7
1450	0.91	1600	22	1558.1	2.1	31	1558.1	3.0	42	1552.4	4.1	60	1498.9	6.1	83	1517	8.3
960	0.60				1.4			2.0			2.7			4.0			5.5
710	0.44				1.0			1.5			2.0			3.0			4.1
1450	0.81	1800	22	1769.4	1.9	31	1769.4	2.7	42	1762.9	3.6	60	1702.1	5.4	83	1722.8	7.3
960	0.53				1.2			1.8			2.4			3.5			4.8
710	0.39				0.9			1.3			1.8			2.6			3.6
1450	0.73	2000	22	1930.3	1.8	31	1930.3	2.5	42	1923.2	3.3	60	1856.9	4.9	83	1879.4	6.7
960	0.48				1.2			1.6			2.2			3.2			4.4
710	0.36				0.9			1.2			1.6			2.4			3.3
1450	0.65	2240	22	2218.92	1.5	31	2218.92	2.1	42	2209.74	2.9	60	2133.53	4.3	83	2159.37	5.8
960	0.43				1.0			1.4			1.9			2.8			3.9
710	0.32				0.7			1.0			1.4			2.1			2.9
1450	0.58	2500	22	2479.56	1.3	31	2479.56	1.9	42	2469.29	2.6	60	2384.14	3.8	83	2413.01	5.2
960	0.38				0.9			1.3			1.7			2.5			3.5
710	0.28				0.7			0.9			1.3			1.9			2.6
1450	0.52	2800	22	2712.01	1.2	31	2712.01	1.7	42	2700.79	2.4	60	2607.65	3.5	83	2639.23	4.8
960	0.34				0.8			1.1			1.6			2.3			3.2
710	0.25				0.6			0.8			1.2			1.7			2.3
1450	0.46	3150	22	3138.19	1.1	31	3138.19	1.5	42	3125.20	2.0	60	3017.42	3.0	83	3053.96	4.1
960	0.30				0.7			1.0			1.4			2.0			2.7
710	0.23				0.5			0.7			1.0			1.5			2.0
1450	0.41	3550	22	3633.91	0.9	31	3633.91	1.3	42	3620.67	1.8	60	3495.81	2.6	83	3538.14	3.6
960	0.27				0.6			0.9			1.2			1.7			2.4
710	0.20				0.5			0.6			0.9			1.3			1.7
1450	0.36	4000	22	4210.03	0.8	31	4210.03	1.1	42	4160.53	1.5	60	4017.07	2.3	83	4099.00	3.1
960	0.24				0.5			0.7			1.0			1.5			2.0
710	0.18				0.4			0.5			0.8			1.1			1.5

T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	T _{2N} (kNm)	i _{ex}	P _{1N} (kW)	i _N	n _{2N} (r/min)	n ₁ (r/min)
117	551.29	32.2	160	551.25	29.2	202	551.25	55.6	244	544.28	68.1	295	580.56	77.2	560	2.59	1450
		21.3			44.1			36.8			45.1			51.1		1.71	960
		15.8			21.6			27.2			33.3			37.8		1.27	710
117	623.14	28.5	160	623.09	39.0	202	623.09	49.2	244	615.21	60.2	295	656.22	68.3	630	2.30	1450
		18.9			25.8			32.6			39.9			45.2		1.52	960
		14.0			19.1			24.1			29.5			33.4		1.13	710
117	682.06	26.0	160	679.88	35.7	202	679.88	45.1	244	673.37	55.0	295	718.27	62.4	710	2.04	1450
		17.2			23.7			29.9			36.4			41.3		1.35	960
		12.8			17.5			22.1			26.9			30.5		1.00	710
117	757.04	23.5	160	751.48	32.3	202	751.48	40.8	244	747.4	49.6	295	797.23	56.2	800	1.81	1450
		15.5			21.4			27.0			32.8			37.2		1.20	960
		11.5			15.8			20.0			24.3			27.5		0.89	710
117	855.70	20.8	160	844.56	28.8	202	844.56	36.3	244	844.81	43.9	295	901.13	49.7	900	1.61	1450
		13.7			19.0			24.0			29.0			32.9		1.07	960
		10.2			14.1			17.8			21.5			24.3		0.79	710
117	956.3	18.6	160	943.84	25.7	202	943.84	32.5	244	937.9	39.5	295	1000.4	44.8	1000	1.45	1450
		12.3			17.0			21.5			26.2			29.6		0.96	960
		9.1			12.6			15.9			19.3			21.9		0.71	710
117	1107.3	16.0	160	1092.4	23.6	202	1092.9	29.8	244	1077.6	34.4	295	1149.5	39.0	1120	1.29	1450
		10.6			15.6			19.7			22.8			25.8		0.86	960
		7.9			11.6			14.6			16.8			19.1		0.63	710
117	1214.4	14.6	160	1198.6	20.3	202	1198.6	25.6	244	1191.1	31.1	295	1270.5	35.3	1250	1.16	1450
		9.7			13.4			16.9			20.6			23.3		0.77	960
		7.2			9.9			12.5			15.2			17.3		0.57	710
117	1317.4	13.5	160	1300.2	18.7	202	1300.2	23.6	244	1292.1	28.7	295	1378.2	32.5	1400	1.04	1450
		8.9			12.4			15.6			19.0			21.5		0.69	960
		6.6			9.1			11.6			14.0			15.9		0.51	710
117	1517	11.7	160	1497.3	16.4	202	1497.3	20.7	244	1487.8	24.9	295	1587	28.2	1600	0.91	1450
		7.8			10.9			13.7			16.5			18.7		0.60	960
		5.7			8.0			10.2			12.2			13.8		0.44	710
117	1722.8	10.3	160	1700.3	14.3	202	1700.3	18.0	244	1689.6	21.9	295	1802.3	24.9	1800	0.81	1450
		6.8			9.5			11.9			14.5			16.5		0.53	960
		5.0			7.0			8.8			10.7			12.2		0.39	710
117	1879.4	9.5	160	1854.9	13.1	202	1854.9	16.5	244	1843.2	20.1	295	1966.1	22.8	2000	0.73	1450
		6.3			8.7			10.9			13.3			15.1		0.48	960
		4.6			6.4			8.1			9.8			11.2		0.36	710
117	2159.4	8.2	160	2131.3	11.4	202	2131.3	14.4	244	2117.8	17.5	295	2259.0	19.8	2240	0.65	1450
		5.4			7.5			9.5			11.6			13.1		0.43	960
		4.0			5.6			7.0			8.6			9.7		0.32	710
117	2413.0	7.4	160	2381.6	10.2	202	2381.6	12.9	244	2366.6	15.7	295	2524.4	17.7	2500	0.58	1450
		4.9			6.8			8.5			10.4			11.7		0.38	960
		3.6			5.0			6.3			7.7			8.7		0.28	710
117	2654.0	6.7	160	2604.9	9.3	202	2604.9	11.8	244	2588.4	14.3	295	2761.0	16.2	2800	0.52	1450
		4.5			6.2			7.8			9.5			10.7		0.34	960
		3.3			4.6			5.8			7.0			7.9		0.25	710
117	3054.0	5.8	160	3014.2	8.1	202	3014.2	10.2	244	2995.2	12.4	295	3194.9	14.0	3150	0.46	1450
		3.9			5.3</												

P3K.. (i=560-4000)(续)

P3K.. (i=560-4000)(continued)

n ₁ (r/min)	n _{2N} (r/min)	i _N	P3..20			P3..21			P3..22			P3..23			P3..24			P3..25		
			T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)
1450	2.59				92.6			103			118			131			151			175
960	1.71	560	354	580.56	61.3	392	580.56	68	450	580.56	78	513	593.88	87	592	593.88	100	684	593.88	116
710	1.27				45.3			50			58			64			74			86
1450	2.30				81.9			91			104			117			135			156
960	1.52	630	354	656.22	54.2	392	656.22	60	450	656.22	69	513	667.44	77	592	667.44	89	684	667.44	103
710	1.13				40.1			44			51			57			66			76
1450	2.04				74.8			83			95			107			123			142
960	1.35	710	354	718.27	49.5	392	718.27	55	450	718.27	63	513	730.55	71	592	730.55	81	684	730.55	94
710	1.00				36.6			41			47			52			60			70
1450	1.81				67.4			75			86			96			111			128
960	1.20	800	354	797.23	44.6	392	797.23	49	450	797.23	57	513	810.87	64	592	810.87	73	684	810.87	85
710	0.89				33.0			37			42			47			54			63
1450	1.61				59.7			66			76			85			98			113
960	1.07	900	354	901.13	39.5	392	901.13	44	450	901.13	50	513	916.54	56	592	916.54	65	684	916.54	75
710	0.79				29.2			32			37			42			48			55
1450	1.45				53.7			60			68			78			89			103
960	0.96	1000	354	1000.4	35.6	392	1000.4	39	450	1000.4	45	513	1004.7	51	592	1004.7	59	684	1004.7	68
710	0.71				26.3			29			33			38			44			51
1450	1.29				46.8			52			59			67			77			89
960	0.86	1120	354	1149.5	31.0	392	1149.5	34	450	1149.5	39	513	1169.1	44	592	1169.1	51	684	1169.1	59
710	0.63				22.9			25			29			33			38			43
1450	1.16				42.3			47			54			60			70			80
960	0.77	1250	354	1270.5	28.0	392	1270.5	31	450	1270.5	36	513	1292.2	40	592	1292.2	46	684	1292.2	53
710	0.57				20.7			23			26			30			34			39
1450	1.04				39.0			43			50			56			64			74
960	0.69	1400	354	1378.2	25.8	392	1378.2	29	450	1378.2	33	513	1401.8	37	592	1401.8	42	684	1401.8	49
710	0.51				19.1			21			24			27			31			36
1450	0.91				33.9			38			43			48			56			64
960	0.60	1600	354	1587	22.4	392	1587	25	450	1587	29	513	1614.2	32	592	1614.2	37	684	1614.2	43
710	0.44				16.6			18			21			24			27			32
1450	0.81				29.8			33			38			42			49			56
960	0.53	1800	354	1802.3	19.7	392	1802.3	22	450	1802.3	25	513	1850.4	28	592	1850.4	32	684	1850.4	37
710	0.39				14.6			16			19			21			24			27
1450	0.73				27.3			30			35			39			45			52
960	0.48	2000	354	1966.1	18.1	392	1966.1	20	450	1966.1	23	513	1999.7	26	592	1999.7	30	684	1999.7	34
710	0.36				13.4			15			17			19			22			25
1450	0.65				23.8			26			30			34			39			45
960	0.43	2240	354	2259.0	15.8	392	2259.0	17	450	2259.0	20	513	2297.7	22	592	2297.7	26	684	2297.7	30
710	0.32				11.7			13			15			17			19			22
1450	0.58				21.3			24			27			30			35			40
960	0.38	2500	354	2524.4	14.1	392	2524.4	16	450	2524.4	18	513	2567.6	20	592	2567.6	23	684	2567.6	27
710	0.28				10.4			12			13			15			17			20
1450	0.52				19.5			21.6			24.7			28			32			37
960	0.34	2800	354	2761.0	12.9	392	2761.0	14.3	450	2761.0	16.4	513	2808.3	18	592	2808.3	21	684	2808.3	24
710	0.25				9.5			10.6			12.1			14			16			18
1450	0.46				16.8			18.6			21.4			24			28			32
960	0.30	3150	354	3194.9	11.1	392	3194.9	12.3	450	3194.9	14.2	513	3249.6	16	592	3249.6	18	684	3249.6	21
710	0.23				8.2			9.1			10.5			12			14			16
1450	0.41				14.5			16.1			18.5			21			24			28
960	0.27	3550	354	3701.4	9.6	392	3701.4	10.6	450	3701.4	12.2	513	3734	14	592	3734	16	684	3734	18
710	0.20				7.1			7.9			9.0			10			12			14
1450	0.36				12.5			13.9			15.9			18			21			24
960	0.24	4000	354	4288.2	8.3	392	4288.2	9.2	450	4288.2	10.5	513	4326.1	12	592	4326.1	14	684	4326.1	16
710	0.18				6.1			6.8			7.8			9			10			12

T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	T _{2N} (kN·m)	i _{ex}	P _{1N} (kw)	i _N	n _{2N} (r/min)	n ₁ (r/min)
195			223			248			277			314			348			396			456			531			560	2.59	1450
129			148			165			184			208			237			278			324			381			360	1.71	960
96			109			122			136			154			174			201			237			284			270	1.27	710
174			197			220			245			278			318			366			423			492			450	2.30	1450
115			131			146			162			184			210			240			282			336			300	1.52	960
85			97			108			120			136			156			180			216			264			210	1.13	710
159			180			201			224			254			294			342			408			486			420	2.04	1450
105			119			133			148			168			192			222			264			318			270	1.35	960
78			88			98			110			124			144			174			216			264			180	1.00	710
143			162			181			202			229			264			312			378			456			360	1.81	1450
95			107			120			134			151			174			204			246			294			270	1.20	960
70			79			89			99			112			132			162			198			246			180	0.89	710
126			144			160			179			202			234			276			336			408			360	1.61	1450
84			95			106			118			134			156			186			228			276			270	1.07	960
62			70			78			87			99			114			138			168			204			150	0.79	710
115			129			144			161			182			210			246			294			354			300	1.45	1450
76			86			95			107			121			141			171			207			254			210	0.96	960
56			63			71			79			89			102			126			156			192			150	0.71	710
99			113			125			140			159</																	

7.6 P系列额定热容量
7.6.1 P2N.. 热容量 (安装方位 B5)
7.6 Nominal Thermal Capacity
7.6.1 P2N.. (Mounting position B5)

规格 Size 风速 Wind velocity P _{G1}	规格 Size																																			
	07	08	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36																
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	13	16	21	26	32	42	49	65	75	92	100	119	142	174	201	242	287	326	366	437																
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	18	22	29	37	45	60	69	92	106	130	147	169	201	246	285	343	406	462	519	619																
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	25	31	39	50	60	80	93	125	143	175	191	228	272	333	386	464	505	626	702	838																

7.6.2 P2S.. 热容量
(安装方位 B52/B53/B54)
7.6.2 P2S.. (Mounting position B52/B53/B54)

规格 Si 风速 Wind velocity P _{G1}	规格 Si																																			
	07	08	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36																
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	10	13	15	20	24	32	36	49	56	69	75	89	106	130	151	182	215	245	275	328																
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	14	17	22	28	34	45	52	69	79	97	106	127	151	185	214	257	305	347	389	464																
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	19	24	29	38	45	60	70	94	107	132	143	171	204	250	289	348	412	469	527	628																

7.6.3 P3N.. 热容量 (安装方位 B5)
7.6.3 P3N.. (Mounting position B5)

规格 Si 风速 Wind velocity P _{G1}	规格 Si																																			
	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36																		
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	14	18	22	29	34	46	52	64	70	83	99	121	141	169	200	228	256	305																		
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	20	26	31	41	48	64	74	91	99	118	140	172	199	240	284	323	362	432																		
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	28	35	42	56	65	87	100	123	133	159	190	233	269	324	384	437	490	585																		

7.6.4 P3S.. 热容量
(安装方位 B52/B53/B54)
7.6.4 P3S.. (Mounting position B52/B53/B54)

规格 Si 风速 Wind velocity P _{G1}	规格 Si																																			
	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36																		
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	12	15	18	24	28	40	43	53	57	69	82	100	116	139	165	188	211	252																		
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	17	21	26	34	40	53	61	75	81	97	116	142	164	197	234	266	298	356																		
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	23	29	35	46	54	72	82	101	110	131	156	192	222	267	316	360	404	482																		

注：其他安装方位热容量请来电咨询。 Note: Thermal capacity of other mounting positions on request.

7.6.5 P2L.. 热容量
(安装方位 B52/B53/B54)
7.6.5 P2L.. (Mounting position B52/B53/B54)

规格 Size 风速 Wind velocity P _{G1}	规格 Size																																			
	07	08	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31~36																		
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	9	12	14	18	22	29	34	46	52	64	70	83	99	121	141	169	200																			
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	13	17	20	26	31	41	48	64	74	91	99	118	140	172	199	240	284																			
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	18	23	28	35	42	56	65	87	100	123	133	159	190	233	269	324	384																			

7.6.6 P2K.. 热容量
(安装方位 B52/B53/B54)
7.6.6 P2K.. (Mounting position B52/B53/B54)

规格 Size 风速 Wind velocity P _{G1}	规格 Size																		
	07	08	09	10	11	12	13	14	16	17	18	19/28							
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	8	10	12	15	18	24	28	38	44	53	58	69							
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	11	14	17	22	26	35	40	54	62	76	82	98							
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	15	19	23	29	35	47	54	73	83	102	111	133							

7.6.7 P3K.. 热容量
(安装方位 B52/B53/B54)
7.6.7 P3K.. (Mounting position B52/B53/B54)

规格 Size 风速 Wind velocity P _{G1}	规格 Size																																			
	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31~36																				
狭小空间安装风速 ≥0.5m/s Small confined spaces Wind velocity ≥0.5m/s	10	12	15	20	23	31	35	43	47	56	67	82	95	109	125																					
大厅或车间安装风速 ≥1.4m/s Large halls or workshops Wind velocity ≥1.4m/s	14	17	21	28	33	44	50	61	66	79	95	116	106	125	144																					
室外安装风速 ≥3.7m/s In the open Wind velocity ≥3.7m/s	19	24	28	38	44	59	67	83	90	107	128	157	166	195	225																					

注：其他安装方位热容量请来电咨询。 Note: Thermal capacity of other mounting positions on request.

8 输出轴径向力 Fr2(N)
8 Radial force on output shaft

n _{2N} (r/min)	Fr2 (N)															
	07	08	09	10	11	12	13	14	16	17	18	19-20	21-22	23-24	25-26	27-28
56~71	4866	6813	9538	23353	32518	42407	34737	41183	72297	64454	69713	70477	99136	99347	123583	126071
50~56	5053	7075	9905	24252	33770	44039	36075	42768	75080	66935	72396	73190	102952	103171	128341	130925
45~50	5256	7632	10302	25223	35122	45803	37519	44481	78086	69616	75295	76121	107075	107302	133480	136167
40~45	5469	7942	10720	26249	36550	47665	39044	46289	81261	72446	78356	79215	111428	111665	138907	141703
35.5~40	5690	8264	11155	27314	38033	49599	40629	48167	84559	75386	81536	82430	115950	116196	144544	147454
31.5~35.5	5919	8595	11602	28408	39556	51585	42256	50096	87945	78404	84801	85731	120593	120849	150332	153358
28~31.5	6131	8903	12017	29423	40970	53429	43766	51887	91088	81207	87832	88795	124903	125169	155705	158840
25~28	6366	9245	12479	30556	42547	55486	45451	53884	94595	84333	91214	92214	129712	129988	161700	164955
22.4~25	6621	9615	12979	31779	44251	57708	47271	56042	98383	87710	94866	95906	134906	135193	168175	171560
20~22.4	6891	10006	13507	33071	46050	60054	49193	58320	102382	91276	98723	99805	140390	140689	175011	178534
18~20	7170	10411	14055	34413	47919	62491	51189	60687	106537	94980	102729	103856	146088	146398	182114	185780
16~18	7458	10829	14618	35791	49838	64993	53239	63117	110803	98783	106843	108014	151937	152260	189406	193219
14~16	7724	11215	15140	37071	51619	67316	55142	65373	114764	102314	110662	111875	157368	157703	196176	200125
12.5~14	8021	11648	15723	38498	53606	69908	57265	67890	119182	106253	114922	116182	163427	163774	203729	207830
11.2~12.5	8320	12082	16309	39933	55605	72514	59400	70421	123626	110215	119207	120514	169520	169880	211325	215578
≤11.2	8641	12547	16937	41471	57746	75306	61687	73132	128385	114458	123796	125153	176046	176420	219460	223878

注：各规格更低的输出转速按以上最大的 Fr2 值。

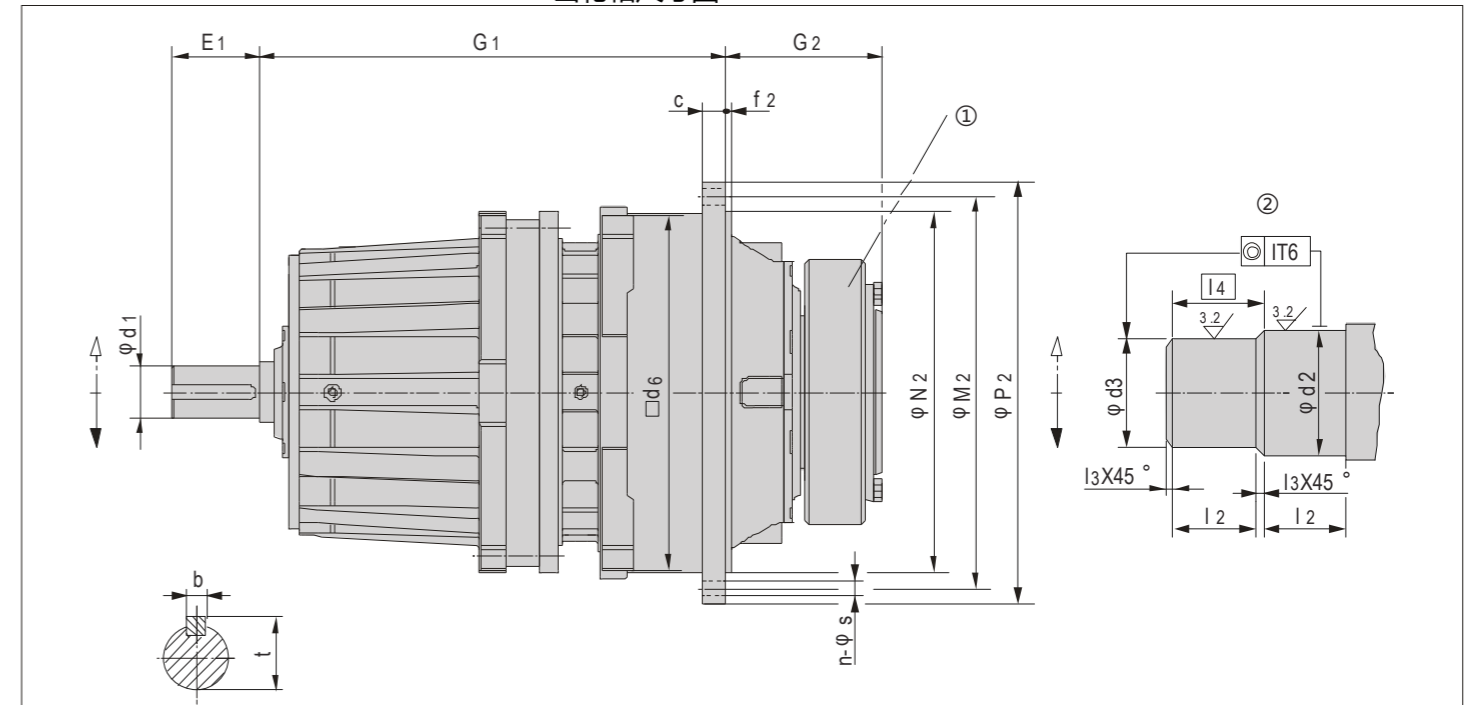
Note: For lower output speed, apply the largest Fr2 value in each type.

9 外形尺寸图表

9.1 齿轮箱尺寸图

9 Outline Dimensions

9.1 Gearbox:



P2NA Size	Nominal output torque T _{2N} (N·m)	Input shaft				c	d ₂	d ₃	d ₆	f ₂	G ₁	G ₂	l ₂	l ₃	l ₄	M ₂	N ₂	P ₂	Flange bolts		Weight (kg)
		d ₁	E ₁	b	t														n	s	
07	10 000	40m6	80	12	43	18	90h6	85h6	/	5	362	135	55	2.5	57.5	300	270h7	335	16	18	106
08	15 000	40m6	80	12	43	22	100h6	95h6	/	6	375	146	60	2.5	62.5	340	305h7	375	20	18	137
09	22 000	55m6	90	16	59	24	120h6	115h6	356	6±1.5	469	165	65	2.5	67.5	388	350h7	428	24	18	145
10	31 000	55m6	90	16	59	28	130h6	125h6	400	8±1.5	489	174	70	2.5	72.5	436	394h7	472	28	18	195
11	42 000	70m6	120	20	74.5	32	140h6	135h6	436	8±1.5	579	204	82.5	2.5	85.0	485	425h7	525	20	22	280
12	60 000	70m6	120	20	74.5	34	160h6	155h6	510	9±1.5	593	224	90	2.5	92.5	555	495h7	605	20	26	425
13	83 000	80m6	140	22	85	39	180g6	175g6	554	11±1.5	714	241	95	2.5	97.5	595	535h7	645	24	26	540
14	117 000	80m6	140	22	85	42	210g6	205g6	629	9	737	278	105	2.5	107.5	665	610h7	720	32	26	805
15	160 000	95m6	160	25	100	44	230g6	225g6	680	10	851	285	110	2.5	112.5	715	660h7	770	36	26	1030
16	202 000	95m6	160	25	100	50	250g6	245g6	775	10	877	294	120	2.5	122.5	830	750h7	895	24	33	1500
17	244 000	110m6	180	28	116	50	260g6	255g6	815	10	1006	303	120	2.5	122.5	865	785h7	930	32	33	1900
19	295 000	110m6	180	28	116	56	280g6	275g6	870	12	1029.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2000
20	354 000	110m6	180	28	116	56	300g6	295g6	870	12	1029.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2100
21	392 000	120m6	210	32	127	62	310g6	305g6	960	24	1046	354	152	2.5	154.5	1025	935h7	1115	32	39	2650
22	450 000	120m6	210	32	127	62	330g6	325g6	960	24	1046	371	152	2.5	154.5	1025	935h7	1115	32	39	2800
23	513 000	130m6	210	32	137	76	350g6	345g6	1056	28	1150	380	164	2.5	166.5	1120	1025h7	1210	36	39	3450
24	592 000	130m6	210	32	137	76	360g6	355g6	1056	28	1150	380	164	2.5	166.5	1120	1025h7	1210	36	39	3900
25	684 000	140m6	240	36	148	74	380g6	375g6	1150	29	1241	407	180	2.5	182.5	1220	1115h7	1320	36	45	4750
26	763 000	140m6	240	36	148	74	400g6	395g6	1150	29	1241	407	180	2.5	182.5	1220	1115h7	1320	36	45	5150
27	852 000	150m6	240	36	158	81	430g6	425g6	1248	31	1379	453	191	2.5	193.5	1345	1215h7	1460	32	52	6100
28	950 000	150m6	240	36	158	81	450g6	445g6	1248	31	1379	453	191	2.5	193.5	1345	1215h7	1460	32	52	6550
29	1060 000	160m6	270	40	169	87	460g6	450g6	1355	34	1457	483	197.5	5	202.5	1450	1320h7	1565	36	52	7800
30	1200 000	160m6	270	40	169	87	480g6	470g6	1355	34	1457	483	197.5	5	202.5	1450	1320h7	1565	36	52	8300
31	1330 000	170m6	270	40	179	94	480g6	470g6	1443	36	1607	538	232	5	237.0	1545	1400h7	1665	32	62	10200
32	1500 000	170m6	270	40	179	94	510g6	500g6	1443	36	1607	538	232	5	237.0	1545	1400h7	1665	32	62	10700
33	1680 000	180m6	310	40	179	100	530g6	520g6	1536	36	1683	573	242	5	247.0	1635	1495h7	1755	36	62	12350
34	1920 000	180m6	310	45	190	100	570g6	560g6	1536	36	1683	573	242	5	247.0	1635	1495h7	1755	36	62	13150
35	2240 000	190m6	310	45	200	112	600g6	590g6	1720	40	1899	656	272	5	277.0	1825	1685h7	1945	40	62	17300
36	2600 000	190m6	310	45	200	112	640g6	630g6	1720	40	1899	656	272	5	277.0	1825	1685h7	1945	40	62	18400

注：*不包括锁紧盘和润滑油的重量。

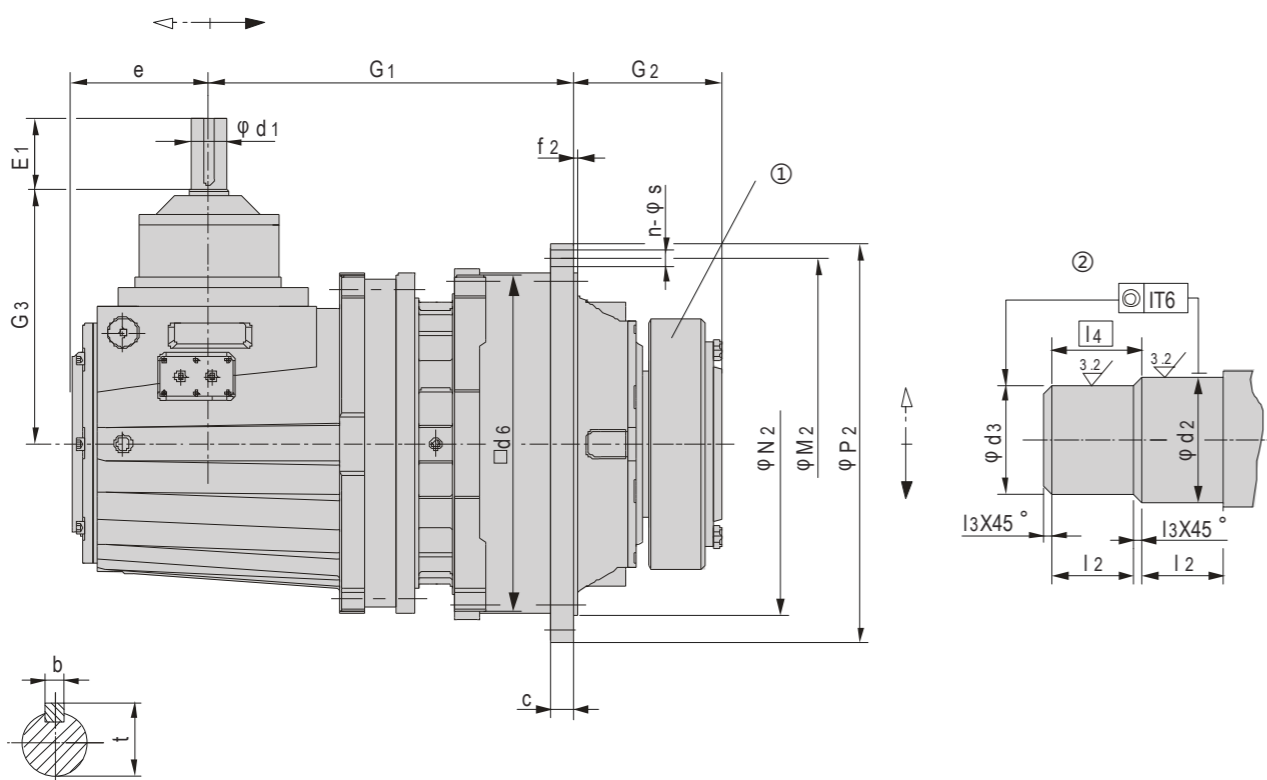
Note:*Weight without shrink disk and oil.

- ① 锁紧盘
- ② 被驱动轴

- ① Shrink disk
- ② Shaft end of driven machine

P2LA.. iN=31.5...100

P2LA.. iN=31.5...100

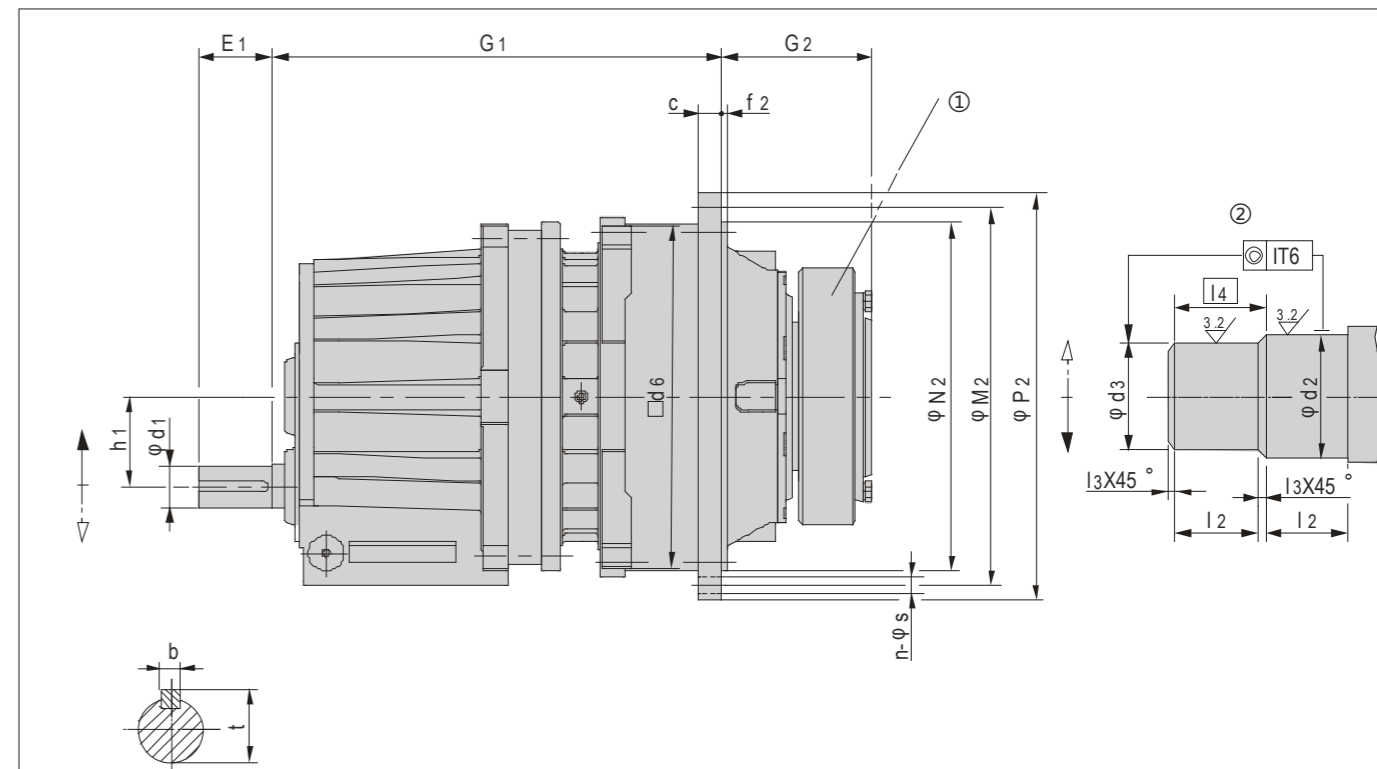


P2LA. Size	Nominal output torque T_{2N} (N·m)	Input shaft																Flange bolts n s	Weight (kg)										
		$iN \leq 90$								$iN \geq 100$																			
		d1	E1	b	t	d1	E1	b	t	c	d2	d3	d6	e	f2	G1	G2			G3	l2	l3	l4	M2	N2	P2			
07	10 000	45k6	110	14	48	53	35k6	80	10	38	18	90h6	85h6	\	140	5	366	135	260	55	2.5	57.5	300	270h7	335	16	18	153	
08	15 000	45k6	110	14	48	53	35k6	80	10	38	22	100h6	95h6	\	140	6	379	146	260	60	2.5	62.5	340	305h7	375	20	18	185	
09	22 000	50k6	100	14	53	54	40k6	80	12	43	24	120h6	115h6	356	185	6±1.5	425	165	305	65	2.5	67.5	388	350h7	428	24	18	159	
10	31 000	50k6	100	14	53	54	40k6	80	12	43	28	130h6	125h6	400	185	8±1.5	445	174	305	70	2.5	72.5	436	394h7	472	28	18	215	
11	42 000	60m6	110	18	64	50k6	100	14	53	53	24	140h6	135h6	436	210	8±1.5	501	204	350	82.5	2.5	85.0	485	425h7	525	20	22	310	
12	60 000	60m6	110	18	64	50k6	100	14	53	53	34	160h6	155h6	510	210	9±1.5	515	224	350	90	2.5	92.5	555	495h7	605	20	26	470	
13	83 000	75m6	135	20	79	560m6	110	18	64	49	39	180g6	175g6	554	250	11±1.5	519	241	415	95	2.5	97.5	595	535h7	645	24	26	595	
14	117 000	75m6	135	20	79	560m6	110	18	64	42	210	205g6	205g6	629	250	9	642	278	415	105	2.5	107.5	665	610h7	720	32	26	890	
16	160 000	85m6	165	22	90	70m6	140	20	74	54	44	230g6	225g6	680	295	10	705	285	490	110	2.5	112.5	715	660h7	770	36	26	1137	
17	202 000	85m6	165	22	90	70m6	140	20	74	55	0	250g6	245g6	775	295	10	731	294	490	120	2.5	122.5	830	750h7	895	24	33	1660	
18	244 000	95m6	165	25	100	75m6	140	20	79	55	0	260g6	255g6	815	350	10	882	303	605	120	2.5	122.5	865	785h7	930	32	33	2100	
19	295 000	95m6	165	25	100	75m6	140	20	79	55	6	280g6	275g6	870	350	12	905	327	605	135	2.5	137.5	915	840h7	980	36	33	2200	
20	354 000	95m6	165	25	100	75m6	140	20	79	55	6	300g6	295g6	870	350	12	905	327	605	135	2.5	137.5	915	840h7	980	36	33	2300	
21	392 000	115m6	205	32	122	90m6	170	25	95	62	310g6	305g6	960	400	24	996	354	700	152	2.5	154.5	1025	935h7	1115	32	39	2930		
22	450 000	115m6	205	32	122	90m6	170	25	95	62	330g6	325g6	960	400	24	996	371	700	152	2.5	154.5	1025	935h7	1115	32	39	3100		
23	513 000	115m6	205	32	122	90m6	170	25	95	76	350g6	345g6	1056	400	28	1055	380	700	164	2.5	166.5	1120	1025h7	1210	36	39	3800		
24	592 000	115m6	205	32	122	90m6	170	25	95	76	360g6	355g6	1056	400	28	1055	380	700	164	2.5	166.5	1120	1025h7	1210	36	39	4300		
25	684 000	140m6	245	36	148	110m6	210	28	116	74	380g6	375g6	1150	475	29	1138	407	835	180	2.5	182.5	1220	1115h7	1320	36	45	5250		
26	763 000	140m6	245	36	148	110m6	210	28	116	74	400g6	395g6	1150	475	29	1138	407	835	180	2.5	182.5	1220	1115h7	1320	36	45	5660		
27	852 000	140m6	245	36	148	110m6	210	28	116	81	430g6	425g6	1248	475	31	1272	453	835	191	2.5	193.5	1345	1215h7	1460	32	52	6680		
28	950 000	140m6	245	36	148	110m6	210	28	116	81	450g6	445g6	1248	475	31	1272	453	835	191	2.5	193.5	1345	1215h7	1460	32	52	7180		
29	1060 000	150m6	245	40	169	115m6	210	32	122	87	460g6	450g6	1355	530	34	1367	483	945	197.5	2.5	202.5	1450	1320h7	1565	36	52	8500		
30	1200 000	150m6	245	40	169	115m6	210	32	122	87	480g6	470g6	1355	530	34	1367	483	945	197.5	2.5	202.5	1450	1320h7	1565	36	52	9070		
31-36																													On request

注：*不包括锁紧盘和润滑油的重量。 Note:*Weight without shrink disk and oil.
 ① 锁紧盘 ① Shrink disk
 ② 被驱动轴 ② Shaft end of driven machine

P2SA.. iN=45...125

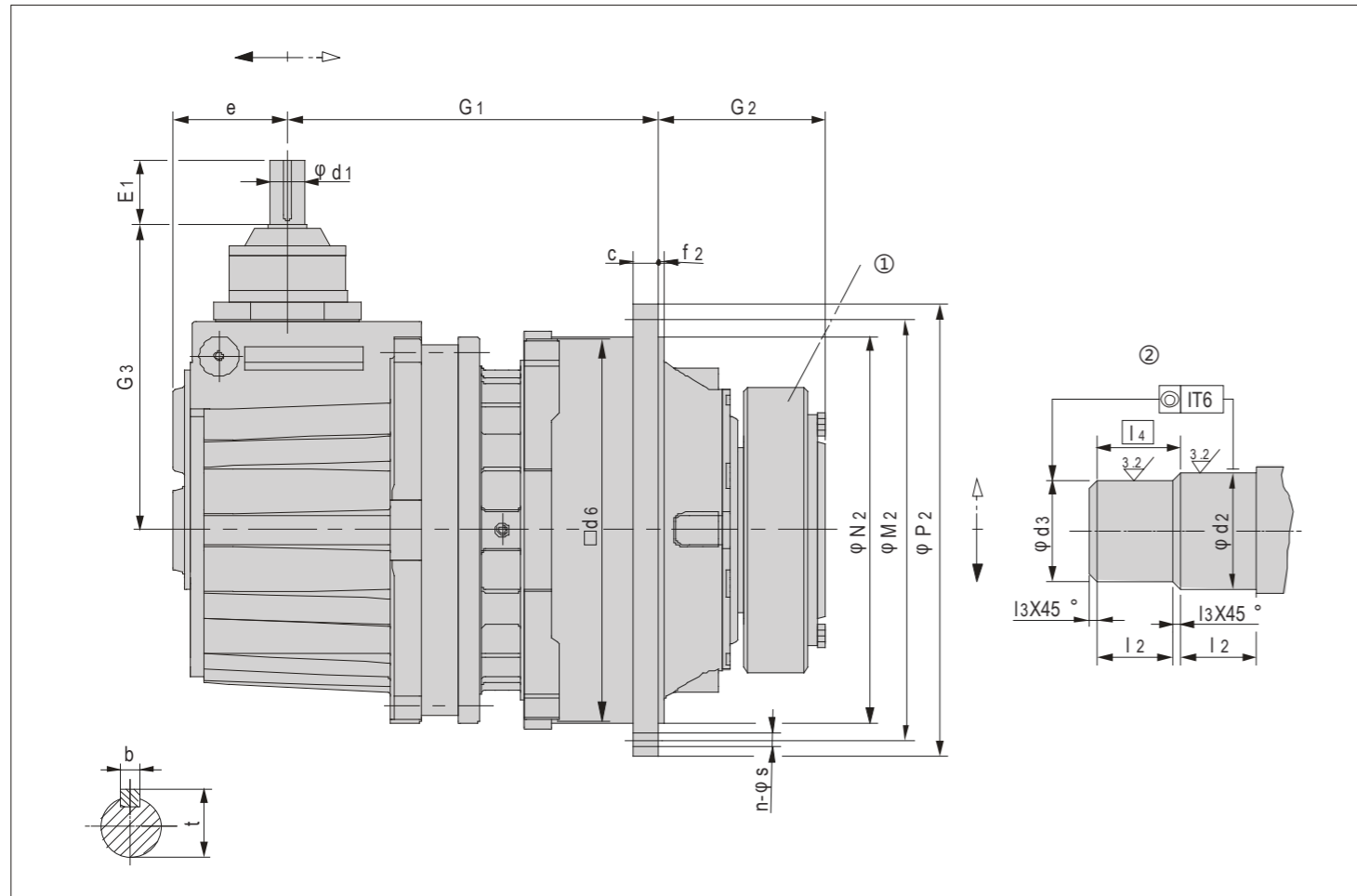
P2SA.. iN=45...125



P2SA. Size	Nominal output torque T_{2N} (N·m)	Input shaft																Flange bolts n s	Weight (kg)			
		d1	E1	b	t	c	d2	d3	d6	f2	G1	G2	h2	l2	l3	l4	M2			N2	P2	
07	10 000	32k6	60	10	35	18	90h6	85h6	/	5	408	135	76	55	2.5	57.5	300	270h7	335	16	18	117
08	15 000	32k6	60	10	35	22	100h6	95h6	/	6	421	146	76	60	2.5	62.5	340	305h7	375	20	18	148
09	22 000	38k6	60	10	41	24	120h6	115h6	356	6±1.5	469	165	90	65	2.5	67.5	388	350h7	428	24	18	160
10	31 000	38k6	60	10	41	28	130h6	125h6	400	8±1.5	489	174	90	70	2.5	72.5	436	394h7	472	28	18	220
11	42 000	55m6	90	16	59	32	140h6	135h6	436	8±1.5	579	204	115	82.5	2.5	85.0	485	425h7	525	20	22	310
12	60 000	55m6	90	16	59	34	160h6	155h6	510	9±1.5	593	224	115	90	2.5	92.5	555	495h7	605	20	26	470
13	83 000	70m6	120	20	74	39	180g6	175g6	554	11±1.5	714	241	140	95	2.5	97.5	595	535h7	645	24	26	600
14	117 000	70m6	120	20	74	42	210g6	205g6	629	9	737	278	140	105	2.5	107.5	665	610h7	720	32	26	900
16	160 000	80m6	140	22	85	44	230g6	225g6	680	10	851	285	170	110	2.5	112.5	715	660h7	770	36	26	1150
17	202 000	80m6	140	22	85	50	250g6	245g6	775	10	877	294	170	120	2.5	122.5	830	750h7	895	24	33	1650
18	244 000	90m6	160	25	95	50	260g6	255g6	815	10	1006	303	200	120	2.5	122.5	865	785h7	930	32	33	1950
19	295 000	90m6	160	25	95	56	280g6	275g6	870	12	1029	327	200	135	2.5	137.5	915	840h7	980	36	33	2400
20	354 000	90m6	160	25	95	56	300g6	295g6	870	12	1029	327	200	135	2.5	137.5	915	840h7	980	36	33	2500
21	392 000	100m6	180	28	106	62	310g6	305g6	960	24	1076	354	230	152	2.5	154.5	1025	935h7	1115	32	39	2900
22	450 000	100m6	180	28	106	62	330g6	325g6	960	24	1076	371	230	152	2.5	154.5	1025	935h7	1115	32	39	3100
23	513 000	120m6	210	32	127	76	350g6	345g6	1056	28	1175	380	265	164	2.5	166.5	1120	1025h7	1210	36	39	3800
24	592 000	120m6	210	32	127	76	360g6	355g6	1056	28	1175	380	265	164	2.5	166.5	1120	1025h7	1210	36	39	4100
25	684 000	130m6	210	32	137	74	380g6	375g6	1150	29	1291	407	300	180	2.5	182.5	1220	1115h7	1320	36	45	4950
26	763 000	130m6	210	32	137	74	400g6	395g6	1150	29	1291	407	300	180	2.5	182.5	1220	1115h7	1320	36	45	5350
27	852 000	140m6	240	36	148	81	430g6	425g6	1248	31	1429	453	320	191	2.5	193.5	1345	1215h7	1460	32	52	6800
28	950 000	140m6	240	36	148	81	450g6	445g6	1248	31	1429	453	320	191	2.5	193.5	1345	1215h7	1460	32	52	7200
29	1060 000	150m6	240	36	158	87	460g6	450g6	1355	34	1507	483	360	197.5	2.5	202.5	1450	1320h7	1565	36	52	8500
30	1200 000	150m6	240	36	158	87	480g6	470g6	1355	34	1507	483	360	197.5	2.5	202.5	1450	1320h7	1565	36	52	9000
31	1330 000	160m6	270	40	169	94	480g6	470g6	1443	36	1662	538	400	232	5	237.0	1545	1400h7	1665	32	62	10500
32	1500 000	160m6	270	40	169	94	510g6	500g6	1443	36	1662	538	400	232	5	237.0	1545	1400h7	1665	32	62	11200
33	1680 000	170m6	270	40	179	100	530g6	520g6	1536	36	1743	573	400	242	5	247.0	1635	1495h7	1755	36	62	12700
34	1920 000	170m6	270	40	179	100	570g6	560g6	1536	36	1743	573	400	242	5	247.0	1635	1495h7	1755	36	62	13500
35	2240 000	180m6	310	45	190	112	600g6	590g6														

P2KA..iN = 112 ... 500

P2KA..iN = 112 ... 500

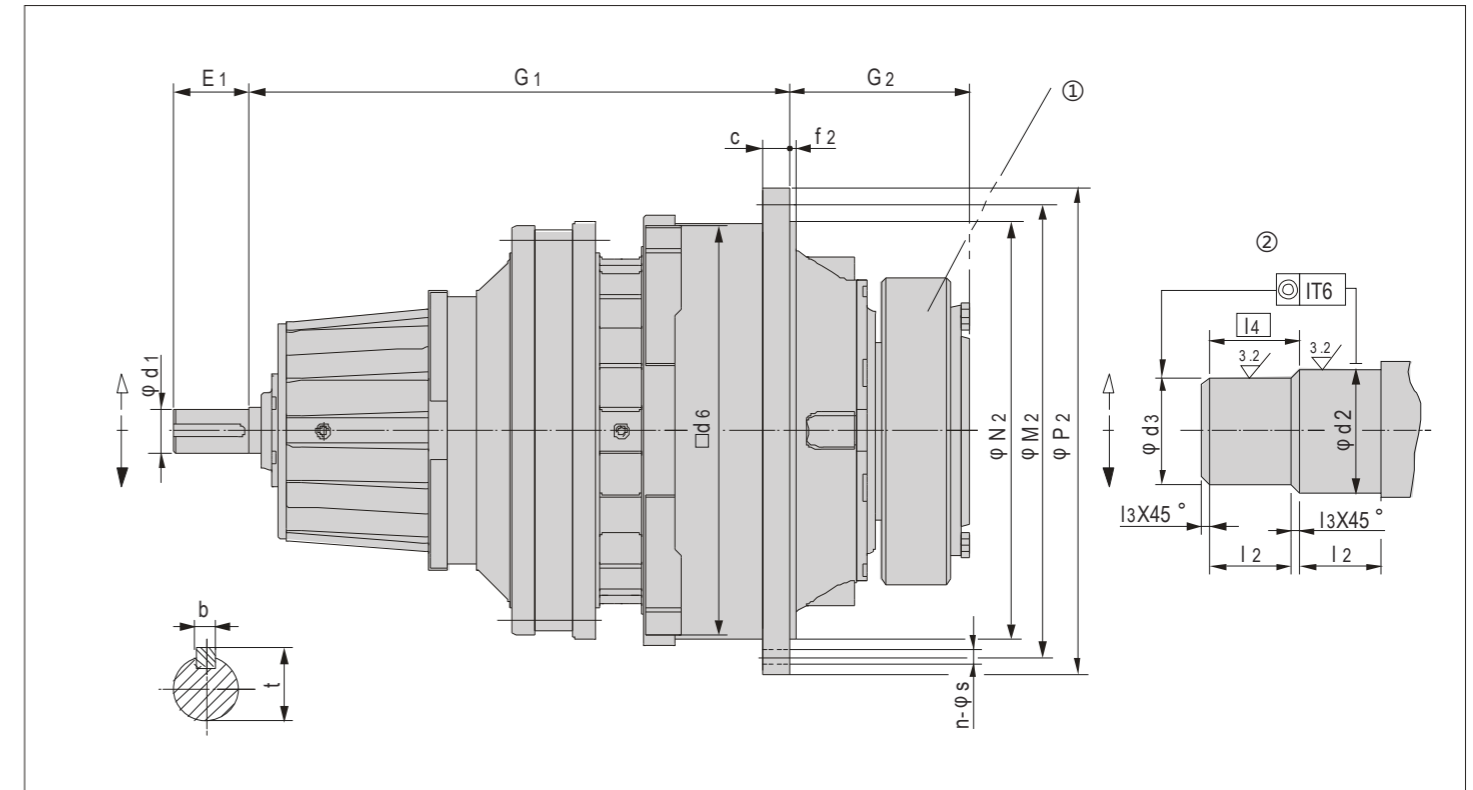


P2KA. Size	Nominal output torque T_{2N} (N·m)	Input shaft																Flange bolts		Weight (kg)							
		$iN \leq 360$								$iN \geq 400$								n	s								
		d1	E1	b	t	d1	E1	b	t	c	d2	d3	d6	e	f2	G1	G2				G3	l2	l3	l4	M2	N2	P2
07	10 000	35k6	80	10	38	25k6	50	8	28	18	90h6	85h6	\	110	5	293.5	135	286	55	2.5	57.5	300	270h7	335	16	18	127
08	15 000	35k6	80	10	38	25k6	50	8	28	22	100h6	95h6	\	110	6	306.5	146	286	60	2.5	62.5	340	305h7	375	20	18	159
09	22 000	35k6	70	10	38	30k6	60	8	33	24	120h6	115h6	356	119	6±1.5	339	165	320	65	2.5	67.5	388	350h7	428	24	18	165
10	31 000	35k6	70	10	38	30k6	60	8	33	28	130h6	125h6	400	119	8±1.5	359	174	320	70	2.5	72.5	436	394h7	472	28	18	227
11	42 000	45k6	80	14	48.5	35k6	60	10	38	32	140h6	135h6	436	137	8±1.5	419	204	375	82.5	2.5	85	485	425h7	525	20	22	320
12	60 000	45k6	80	14	48.5	35k6	60	10	38	34	160h6	155h6	510	137	9±1.5	433	224	375	90	2.5	92.5	555	495h7	605	20	26	447
13	83 000	50k6	100	14	53.5	40k6	80	12	43	39	180g6	175g6	554	172	11±1.5	518	241	445	95	2.5	97.5	595	535h7	645	24	26	618
14	117 000	50k6	100	14	53.5	40k6	80	12	43	42	210g6	205g6	629	172	9	542.5	278	445	105	2.5	107.5	665	610h7	720	32	26	927
16	160 000	60m6	110	18	64	50k6	100	14	53.5	44	230g6	225g6	680	194	10	632	285	520	110	2.5	112.5	715	660h7	770	36	26	1184
17	202 000	60m6	110	18	64	50k6	100	14	53.5	50	250g6	245g6	775	194	10	658	294	520	120	2.5	122.5	830	750h7	895	24	33	1700
18	244 000	75m6	135	20	79.5	60m6	110	18	64	50	260g6	255g6	815	240	10	741.5	303	615	120	2.5	122.5	865	785h7	930	32	33	2010
19	295 000	75m6	135	20	79.5	60m6	110	18	64	56	280g6	275g6	870	240	12	764.5	327	615	135	2.5	137.5	915	840h7	980	36	33	2470
20	354 000	75m6	135	20	79.5	60m6	110	18	64	56	300g6	295g6	870	240	12	764.5	327	615	135	2.5	137.5	915	840h7	980	36	33	2550
21-26	On request																										

注: *不包括锁紧盘和润滑油的重量。 Note: *Weight without shrink disk and oil.
 ① 锁紧盘 ① Shrink disk
 ② 被驱动轴 ② Shaft end of driven machine

P3NA..iN = 140 ... 280

P3NA..iN = 140 ... 280

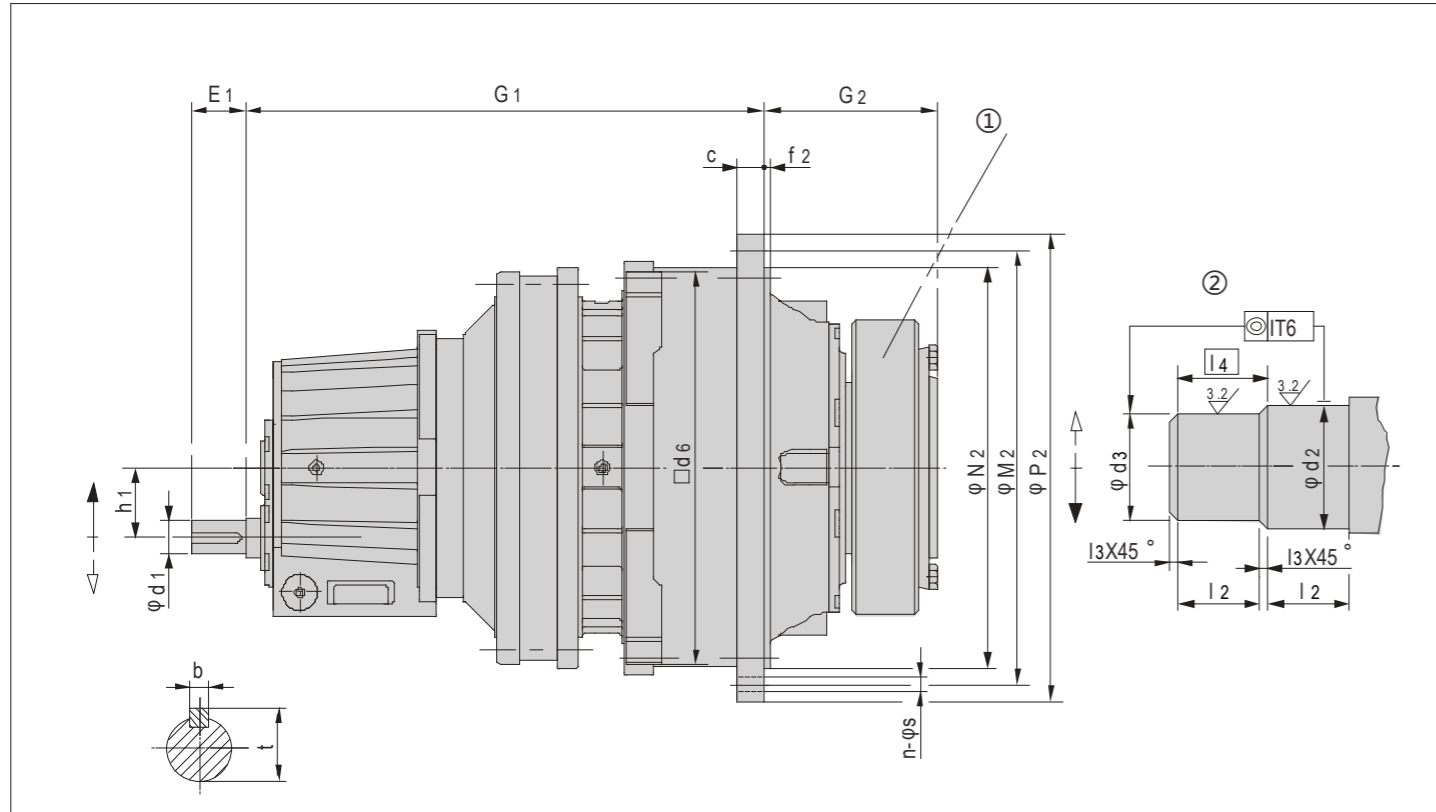


P3NA. Size	Nominal output torque T_{2N} (N·m)	Input shaft																Flange bolts		Weight (kg)						
		d1	E1	b	t	c	d2	d3	d6	f2	G1	G2	l2	l3	l4	M2	N2	P2	n		s					
		09	22 000	55m6	90	16	59	24	120h6	115h6	356	6±1.5	565	165	65	2.5	67.5	388				350h7	428	24	18	152
10	31 000	55m6	90	16	59	28	130h6	125h6	400	8±1.5	585	174	70	2.5	72.5	436	394h7	472	28	18	205					
11	42 000	55m6	90	16	59	32	140h6	135h6	436	8±1.5	616	204	82.5	2.5	85.0	485	425h7	525	20	22	295					
12	60 000	55m6	90	16	59	34	160h6	155h6	510	9±1.5	630	224	90	2.5	92.5	555	495h7	605	20	26	447					
13	83 000	55m6	90	16	59	39	180g6	175g6	554	11±1.5	688	241	95	2.5	97.5	595	535h7	645	24	26	567					
14	117 000	55m6	90	16	59	42	210g6	205g6	629	9	711	278	105	2.5	107.5	665	610h7	720	32	26	850					
16	160 000	70m6	120	20	74.5	44	230g6	225g6	680	10	853	285	110	2.5	112.5	715	660h7	770	36	26	1085					
17	202 000	70m6	120	20	74.5	50	250g6	245g6	775	10	879	294	120	2.5	122.5	830	750h7	895	24	33	1580					
18	244 000	80m6	140	22	85	50	260g6	255g6	815	10	1013.5	303	120	2.5	122.5	865	785h7	930	32	33	2000					
19	295 000	80m6	140	22	85	56	280g6	275g6	870	12	1036.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2100					
20	354 000	80m6	140	22	85	56	300g6	295g6	870	12	1036.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2200					
21	392 000	80m6	140	22	85	62	310g6	305g6	960	24	1093	354	152	2.5	154.5	1025	935h7	1115	32	39	2785					
22	450 000	80m6	140	22	85	62	330g6	325g6	960	24	1093	371	152	2.5	154.5	1025	935h7	1115	32	39	2950					
23	513 000	95m6	160	25	100	76	350g6	345g6	1056	28	1222	380	164	2.5	166.5	1120	1025h7	1210	36	39	3625					
24	592 000	95m6	160	25	100	76	360g6	355g6	1056	28	1222	380	164	2.5	166.5	1120	1025h7	1210	36	39	4100					
25	684 000	95m6	160	25	100	74	380g6	375g6	1150	29	1284.5	407	180	2.5	182.5	1220	1115h7	1320	36	45	5000					
26	763 000	95m6	160	25	100	74	400g6	395g6	1150	29	1284.5	407	180	2.5	182.5	1220	1115h7	1320	36	45	5400					
27	852 000	110m6	180	28	116	81	430g6	425g6	1248	31	1470	453	191	2.5	193.5	1345	1215h7	1460	32	52	6400					
28	950 000	110m6	180	28	116	81	450g6	445g6	1248	31	1470	453	191	2.5	193.5	1345	1215h7	1460	32	52	6875					
29	1 060 000	110m6	180	28	116	87	460g6	450g6	1355	34	1517	483	197.5	5	202.5	1450	1320h7	1565	36	52	8190					
30	1 200 000	110m6	180	28	116	87	480g6	470g6	1355	34	1517	483	197.5	5	202.5	1450	1320h7	1565	36	52	8715					
31	1 330 000	120m6	210	32	127	94	480g6	470g6	1433	36	1585	540	232	5	237.0	1545	1400h7	1665	32	62	10700					
32	1 500 000	120m6	210	32	127	94	510g6	500g6	1443	36	1585	540	232	5	237.0	1545	1400h7	1665	32	62	11200					
33	1 680 000	130m6	210	32	137	100	530g6	520g6	1536	36	1710	573	242	5	247.0	1635	1495h7	1755	36	62	12950					
34	1 920 000	130m6	210	32	137	100	570g6	560g6	1536	36	1710	573	242	5	247.0	1635	1495h7	1755	36	62	13800					
35-36	On request																									

注: *不包括锁紧盘和润滑油的重量。 Note: *Weight without shrink disk and oil.
 ① 锁紧盘 ① Shrink disk
 ② 被驱动轴 ② Shaft end of driven machine

P3SA.. iN=280...900

P3SA.. iN=280...900

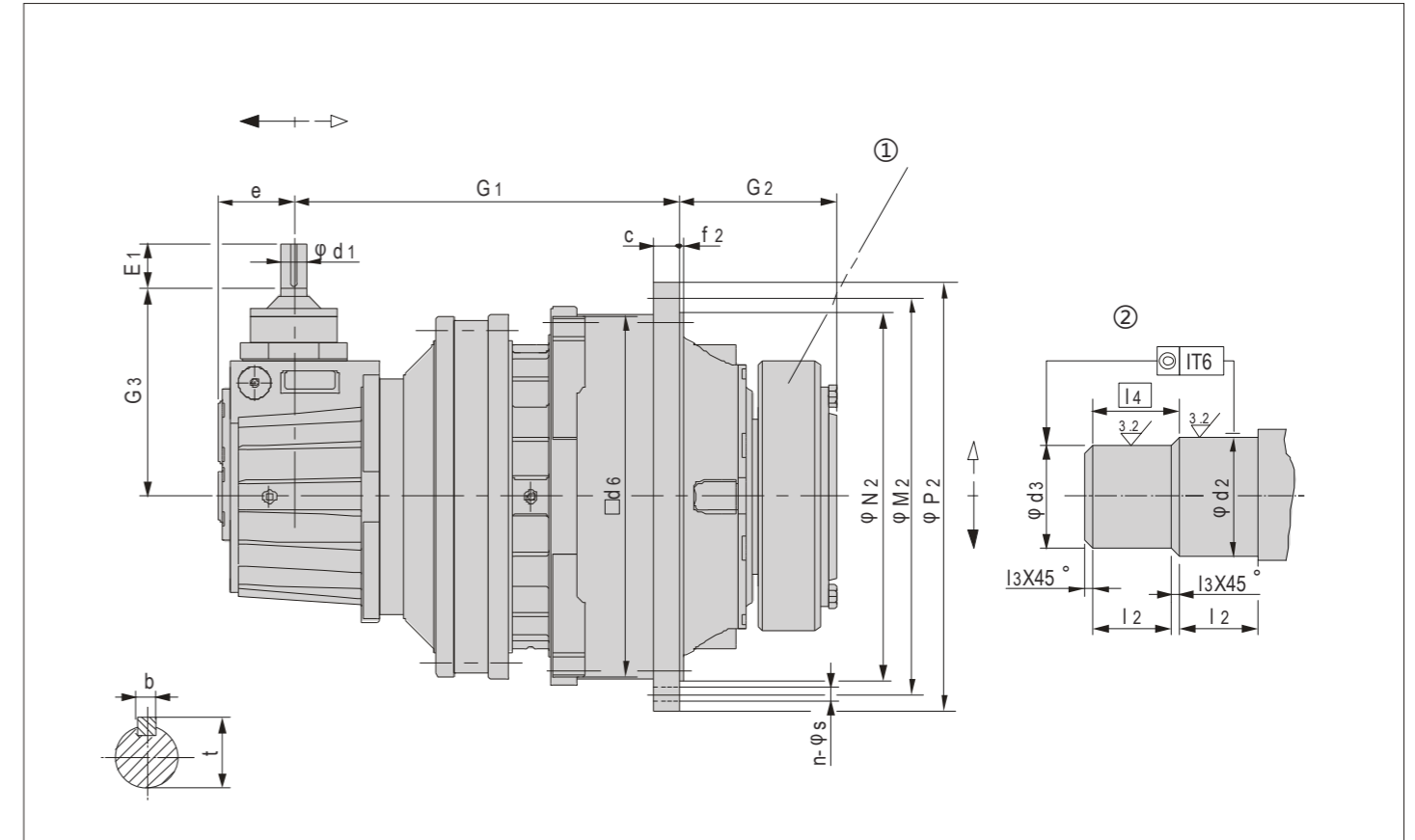


P3SA.. Size	Nominal output torque T_{2N} (N·m)	Input shaft				c	d ₂	d ₃	d ₆	f ₂	G ₁	G ₂	h ₁	l ₂	l ₃	l ₄	M ₂	N ₂	P ₂	Flange bolts		Weight (kg)
		d ₁	E ₁	b	t															n	s	
09	22 000	38k6	60	10	41	24	120h6	115h6	356	6±1.5	565	165	90	65	2.5	67.5	388	350h7	428	24	18	170
10	31 000	38k6	60	10	41	28	130h6	125h6	400	8±1.5	585	174	90	70	2.5	72.5	436	394h7	472	28	18	230
11	42 000	38k6	60	10	41	32	140h6	135h6	436	8±1.5	616	204	90	82.5	2.5	85.0	485	425h7	525	20	22	310
12	60 000	38k6	60	10	41	34	160h6	155h6	510	9±1.5	630	224	90	90	2.5	92.5	555	495h7	605	20	26	460
13	83 000	38k6	60	10	41	39	180g6	175g6	554	11±1.5	688	241	90	95	2.5	97.5	595	535h7	645	24	26	584
14	117 000	38k6	60	10	41	42	210g6	205g6	629	9	711	278	90	105	2.5	107.5	665	610h7	720	32	26	875
16	160 000	55m6	90	16	59	44	230g6	225g6	680	10	853	285	115	110	2.5	112.5	715	660h7	770	36	26	1115
17	202 000	55m6	90	16	59	50	250g6	245g6	775	10	879	294	115	120	2.5	122.5	830	750h7	895	24	33	1625
18	244 000	70m6	120	20	74	550	260g6	255g6	815	10	1013.5	303	140	120	2.5	122.5	865	785h7	930	32	33	2060
19	295 000	70m6	120	20	74	556	280g6	275g6	870	12	1036.5	327.5	140	135	2.5	137.5	915	840h7	980	36	33	2160
20	354 000	70m6	120	20	74	556	300g6	295g6	870	12	1036.5	327.5	140	135	2.5	137.5	915	840h7	980	36	33	2260
21	392 000	70m6	120	20	74	562	310g6	305g6	960	24	1093	354	140	152	2.5	154.5	1025	935h7	1115	32	39	2870
22	450 000	70m6	120	20	74	562	330g6	325g6	960	24	1093	371	140	152	2.5	154.5	1025	935h7	1115	32	39	3040
23	513 000	80m6	140	22	85	76	350g6	345g6	1056	28	1222	380	170	164	2.5	166.5	1120	1025h7	1210	36	39	3730
24	592 000	80m6	140	22	85	76	360g6	355g6	1056	28	1222	380	170	164	2.5	166.5	1120	1025h7	1210	36	39	4220
25	684 000	80m6	140	22	85	74	380g6	375g6	1150	29	1284	407	170	180	2.5	182.5	1220	1115h7	1320	36	45	5150
26	763 000	80m6	140	22	85	74	400g6	395g6	1150	29	1284	407	170	180	2.5	182.5	1220	1115h7	1320	36	45	5560
27	852 000	90m6	160	25	95	81	430g6	425g6	1248	31	1470	453	200	191	2.5	193.5	1345	1215h7	1460	32	52	6580
28	950 000	90m6	160	25	95	81	450g6	445g6	1248	31	1470	453	200	191	2.5	193.5	1345	1215h7	1460	32	52	7080
29	1 060 000	90m6	160	25	95	87	460g6	450g6	1355	34	1517	483	200	197.5	5	202.5	1450	1320h7	1565	36	52	8400
30	1 200 000	90m6	160	25	95	87	480g6	470g6	1355	34	1517	483	200	197.5	5	202.5	1450	1320h7	1565	36	52	8970
31	1 330 000	100m6	180	28	106	94	480g6	470g6	1443	36	1617	538	230	232	5	237.0	1545	1400h7	1665	32	62	11000
32	1 500 000	100m6	180	28	106	94	510g6	500g6	1443	36	1617	538	230	232	5	237.0	1545	1400h7	1665	32	62	11500
33	1 680 000	120m6	210	32	127	100	530g6	520g6	1536	36	1735	573	265	242	5	247.0	1635	1495h7	1755	36	62	13300
34	1 920 000	120m6	210	32	127	100	570g6	560g6	1536	36	1735	573	265	242	5	247.0	1635	1495h7	1755	36	62	14200
35-36																						On request

注: *不包括锁紧盘和润滑油的重量。 Note: *Weight without shrink disk and oil.
 ① 锁紧盘 Shrink disk
 ② 被驱动轴 Shaft end of driven machine

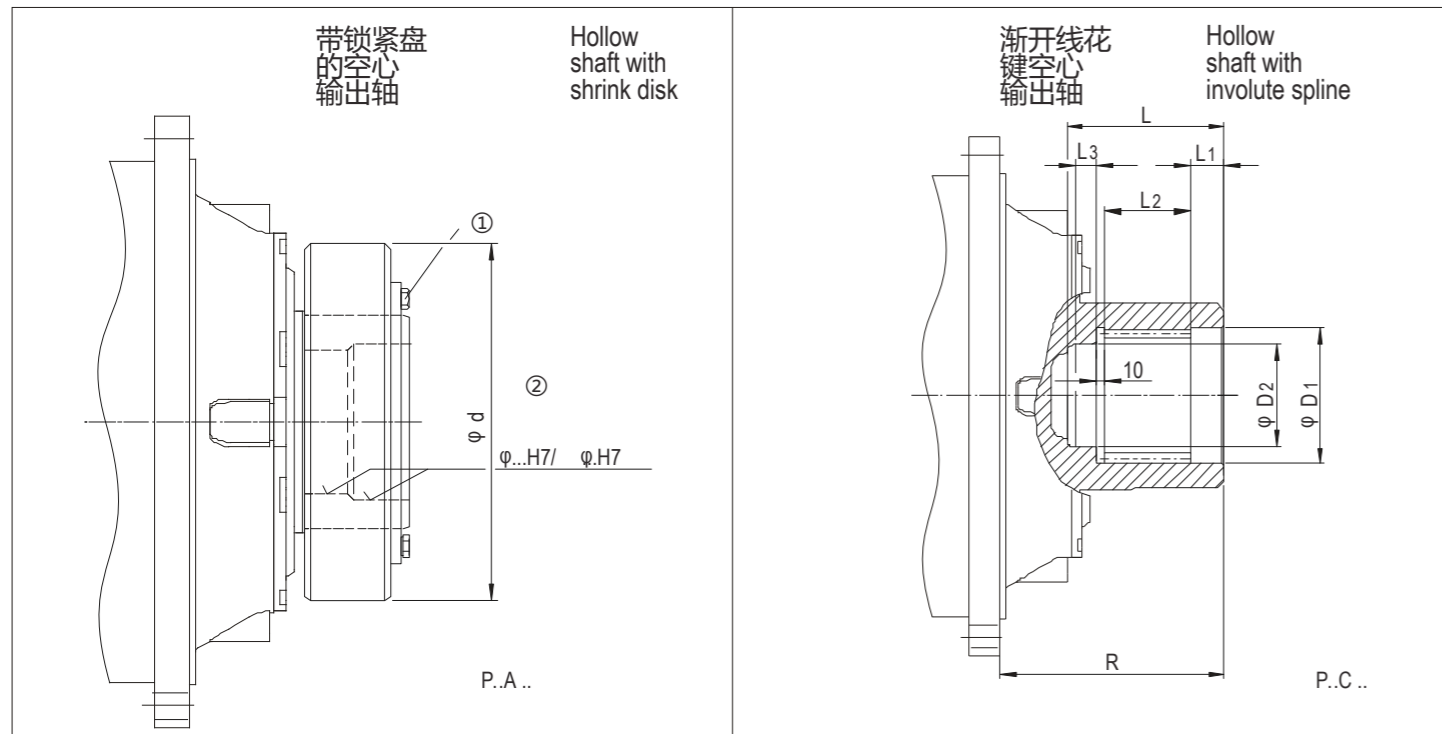
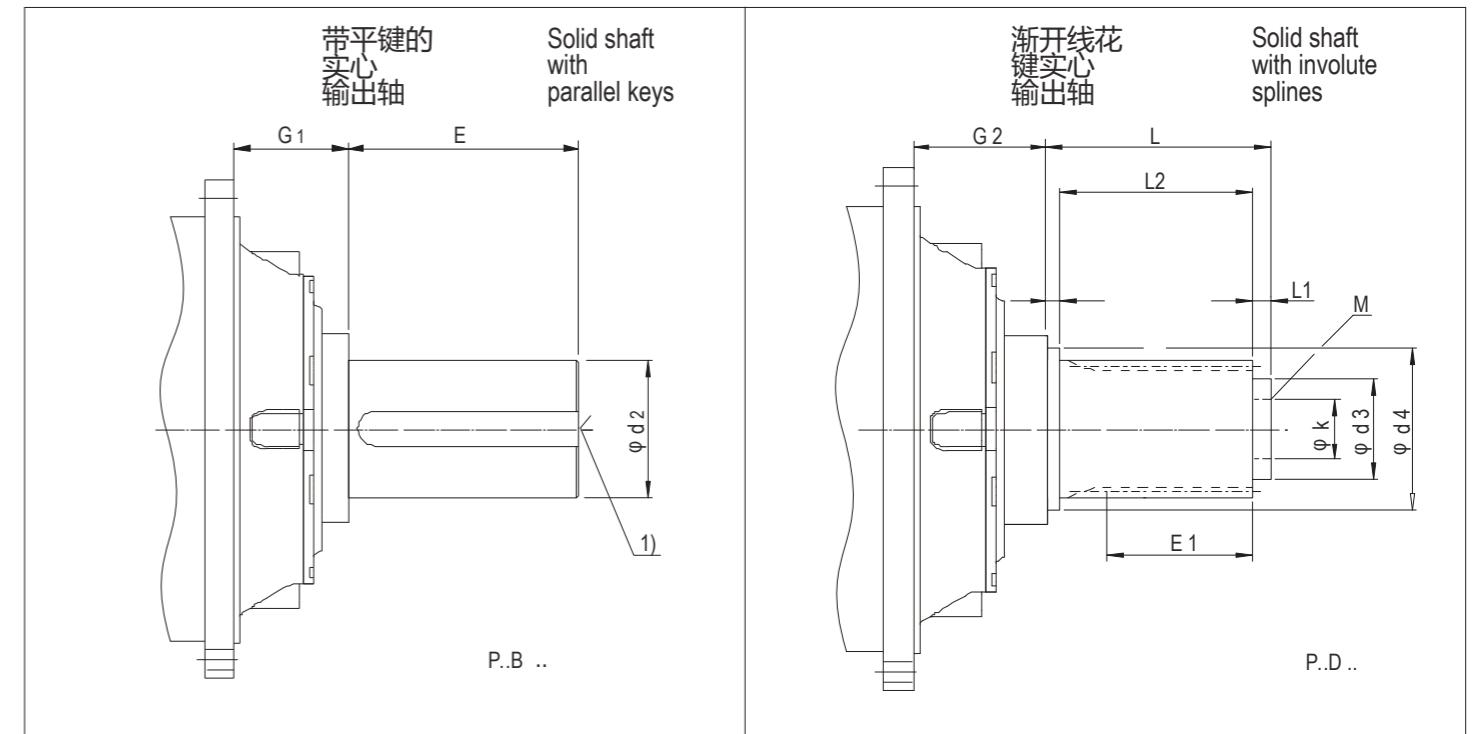
P3KA.. iN=560...4000

P3KA.. iN=560...4000



P3KA.. Size	Nominal output torque T_{2N} (N·m)	Input shaft								c	d ₂	d ₃	d ₆	e	f ₂	G ₁	G ₂	G ₃	l ₂	l ₃	l ₄	M ₂	N ₂	P ₂	Flange bolts		Weight (kg)
		iN ≤ 2000				iN ≥ 2240																			n	s	
		d ₁	E ₁	b	t	d ₁	E ₁	b	t																		
09	22 000	35k6	70	10	38	30k6	60	8	33	24	120h6	115h6	356	119	6±1.5	435	165	320	65	2.5	67.5	388	350h7	428	24	18	180
10	31 000	35k6	70	10	38	30k6	60	8	33	28	130h6	125h6	400	119	8±1.5	455	174	320	70	2.5	72.5	436	394h7	472	28	18	240
11	42 000	35k6	70	10	38	30k6	60	8	33	32	140h6	135h6	436	119	8±1.5	486	204	320	82.5	2.5	85	485	425h7	525	20	22	315
12	60 000	35k6	70	10	38	30k6	60	8	33	34	160h6	155h6	510	119	9±1.5	500	224	320	90	2.5	92.5	555	495h7	605	20	26	470
13	83 000	35k6	70	10	38	30k6	60	8	33	39	180g6	175g6	554	119	11±1.5	558	241	320	95	2.5	97.5	595	535h7	645	24	26	595
14	117 000	35k6	70	10	38	30k6	60	8	33	42	210g6	205g6	629	119	9	581	278	320	105	2.5	107.5	665	610h7	720	32	26	890
16	160 000	45k6	80	14	48.5	35k6	60	10	38	44	230g6	225g6	680	137	10	693	285	375	110	2.5	112.5	715	660h7	770	36	26	1137
17	202 000	45k6	80	14	48.5	35k6	60	10	38	50	250g6	245g6	775	137	10	719	294	375	120	2.5	122.5	830	750h7	895	24	33	1660
18	244 000	50k6	100	14	53.5	40k6	80	12	43	50	260g6	255g6	815	172	10	818	303	445	120	2.5	122.5	865	785h7	930	32	33	2100
19	295 000	50k6	100	14	53.5	40k6	80	12	43	56	280g6	275g6	870	172	12	841	327.5	445	135	2.5	137.5	915	840h7	980	36	33	2200
20	354 000	50k6	100	14	53.5	40k6	80	12	43	56	300g6	295g6	870	172	12	841	327.5	445	135	2.5	137.5	915	840h7	980	36	33	2300
21	392 000	50k6	100	14	53.5	40k6	80	12	43	62	310g6	305g6	960	172	24	897.5	354	445	152	2.5	154.5	1025	935h7	1115	32	39	2930
22	450 000	50k6	100	14	53.5	40k6	80	12	43	62	330g6	325g6	960	172	24	897.5	371	445	152	2.5	154.5	1025	935h7	1115	32	39	3100
23	513 000	60m6	110	18	64	50k6	100	14	53.5	76	350g6	345g6	1056	194	28	1003	380	520	164	2.5	166.5	1120	1025h7	1210	36	39	3800
24	592 000	60m6	110	18	64	50k6	100	14	53.5	76	360g6	355g6	1056	194	28	1003	380	520	164	2.5	166.5	1120	1025h7	1210	36	39	4300
25	684 000	60m6	110	18	64	50k6	100	14	53.5	74	380g6	375g6	1150	194	29	1065	407	520	180	2.5	182.5	1220	1115h7	1320	36	45	5250
26	763 000	60m6	110	18	64	50k6	100	14	53.5	74	400g6	395g6	1150	194	29	1065	407	520	180	2.5	182.5	1220	1115h7	1320	36	45	5660
27	852 000	75m6	135	20	79.5	60m6	110	18	64	81	430g6	425g6	1248	240	31	1205.5	453	615	191	2.5	193.5	1345	1215h7	1460	32	52	6680
28	950 000	75m6	135	20	79.5	60m6	110	18	64	81	450g6	445g6	1248	240	31	1205.5	453	615	191	2.5	193.5	1345	1215h7	1460	32	52	7180
29	1 060 000	75m6	135	20	79.5	60m6	110	18	64	87	460g6	450g6	1355	240	34	1252.5	483	615	197.5	5	202.5	1450	1320h7	1565	36	52	8500
30	1 200 000	75m6	135	20	79.5	60m6	110	18	64	87	480g6	470g6	1355	240	34	1252.5	483	615	197.5	5	202.5	1450	1320h7	1565	36	52	9070

注: *不包括锁紧盘和润滑油的重量。 Note: *Weight without shrink disk and oil.
 ① 锁紧盘 Shrink disk
 ② 被驱动轴 Shaft end of driven machine

9.2 输出轴尺寸图
9.2 Dimensions of output shafts
9.2.1 空心轴
9.2.1 Hollow shaft

9.2.2 实心轴
9.2.2 Solid shaft:


Size	Nominal output torque T_{2N} (N·m)	Shrink disk				Hollow shaft with involute spline							
		Size	d	Bolts	Weight (kg)	Internal spline (DIN5480)	D ₁	D ₂	L	L ₁	L ₂	L ₃	R
07	10 000	SP2-125	215	M10	8.3	N90x3x30x28x9H	92H7	82H7	95	15	55	15	105
08	15 000	SP2-140	230	M12	10	N100x3x30x32x9H	102H7	92H7	105	15	65	15	118
09	22 000	SP2-155	263	M12	15.2	N120x5x30x22x9H	122H7	107H7	150	40	70	20	165
10	31 000	SP2-165	290	M16	21.5	N130x5x30x24x9H	132H7	117H7	160	40	80	20	174
11	42 000	SP2-185	320	M16	32.7	N140x5x30x26x9H	142H7	125H7	180	45	90	25	204
12	60 000	SP2-220	370	M16	53	N160x5x30x30x9	162H7	145H7	190	45	100	25	223
13	83 000	SP2-240	405	M20	66	N180x5x30x34x9H	182H7	165H7	200	45	110	25	237
14	117 000	SP2-280	460	M20	103	N210x5x30x40x9H	212H7	195H7	215	45	125	25	264
16	160 000	SP2-300	485	M20	120	N240x8x30x28x9H	242H7	220H7	235	50	140	25	285
17	202 000	SP2-320	520	M20	138	N250x8x30x30x9H	252H7	230H7	250	50	150	30	290
18	244 000	SP2-340	570	M20	189	N260x8x30x31x9H	262H7	240H7	260	50	160	30	303
19	295 000	SP2-360	590	M20	207	N280x8x30x34x9H	282H7	260H7	270	50	170	30	327.5
20	354 000	SP2-380	640	M24	244	N300x8x30x36x9H	302H7	280H7	280	50	180	30	327.5
21	392 000	SP2-390	650	M24	249	N310x8x30x37x9H	312H7	290H7	310	60	190	40	354
22	450 000	SP2-420	670	M24	285	N330x8x30x40x9H	332H7	310H7	320	60	200	40	354
23	513 000	SP2-440	720	M24	357	N340x8x30x41x9H	342H7	320H7	320	60	200	40	348
24	592 000	SP2-460	770	M24	419	N360x8x30x44x9H	362H7	340H7	340	60	220	40	368
25	684 000	SP2-480	800	M24	492	N380x8x30x46x9H	382H7	360H7	350	60	230	40	372
26	763 000	SP2-500	850	M27	567	N400x8x30x48x9H	402H7	380H7	360	60	240	40	382
27	852 000	SP2-530	910	M27	744	N440x8x30x54x9H	442H7	420H7	370	60	250	40	423
28	950 000	SP2-560	940	M27	776	N450x8x30x55x9H	452H7	430H7	385	65	260	40	428
29	1 060 000	SP2-560	940	M27	736	N460x8x30x56x9H	462H7	440H7	400	65	270	45	433
30	1 200 000	SP2-590	960	M27	845	N480x8x30x58x9H	482H7	460H7	415	65	285	45	448
31	1 330 000	SP2-590	960	M27	835								
32	1 500 000	P8-620	1020	M30	1064								
33	1 680 000	SP2-660	1070	M33	1178								
34	1 920 000	SP2-700	1140	M33	1345								
35	2 240 000	SP2-750	1150	M33	1346								
36	2 600 000	SP2-800	1230	M33	1646								

Size	Nominal output torque T_{2N} (N·m)	Solid shaft with parallel key			Solid shaft with involute splines										
		d ₂	E	G ₁	External splines (DIN5480)	d ₃	d ₄	E ₁	G ₂	k	L	L ₁	L ₂	L ₃	M
07	10 000	100	170	72	W10x3x8x32x8f	90k6	105k6	45	72	60	90	10	65	15	3xM12x18
08	15 000	110	180	80	W10x3x8x35x8f	100k6	115k6	55	80	70	100	10	75	15	3xM12x18
09	22 000	120n6	210	95	W13x5x8x24x8f	110k6	132k6	70	95	80	120	20	80	20	3xM16x24
10	31 000	130n6	210	95	W14x5x8x26x8f	120k6	142k6	80	95	90	130	20	90	20	3xM16x24
11	42 000	150n6	240	109	W16x5x8x30x8f	140k6	162k6	90	109	110	150	25	100	25	3xM16x24
12	60 000	160n6	270	106	W18x5x8x34x8f	90k6	182k6	100	106	130	160	25	110	25	3xM16x24
13	83 000	180n6	310	118	W20x5x8x38x8f	100k6	202k6	110	118	140	175	30	120	25	3xM16x24
14	117 000	210n6	350	139	W22x5x8x42x8f	120k6	222k6	125	139	160	195	30	135	30	3xM16x24
16	160 000	230n6	350	142	W25x8x8x30x8f	140k6	252k6	140	142	185	220	35	155	30	3xM20x30
17	202 000	250n6	400	139	W26x8x8x31x8f	155k6	262k6	150	139	200	240	40	165	35	3xM20x30
18	244 000	260n6	400	134	W28x8x8x34x8f	170k6	282k6	160	134	215	250	40	175	35	3xM20x30
19	295 000	280n6	450	148.5	W30x8x8x36x8f	180k6	302k6	170	148.5	225	260	40	185	35	3xM20x30
20	354 000	300n6	500	148.5	W31x8x8x37x8f	190k6	312k6	180	148.5	235	270	40	195	35	6xM20x30
21	392 000	310n6	500	158	W32x8x8x38x8f	200k6	322k6	190	158	250	280	40	205	35	6xM20x30
22	450 000	330n6	500	158	W34x8x8x41x8f	210k6	342k6	200	158	265	290	40	215	35	6xM20x30
23	513 000	350n6	550	175	W36x8x8x44x8f	230k6	362k6	200	175	275	290	40	215	35	6xM20x30
24	592 000	360n6	590	175	W38x8x8x46x8f	245k6	382k6	220	175	290	310	40	235	35	6xM20x30
25	684 000	380n6	590	182	W40x8x8x48x8f	260k6	402k6	230	182	310	320	40	245	35	6xM24x36
26	763 000	400n6	650	182	W42x8x8x51x8f	280k6	422k6	240	182	330	330	40	255	35	6xM24x36
27	852 000	430n6	690	196.5	W44x8x8x54x8f	310k6	442k6	250	196.5	370	340	40	265	35	6xM24x36
28	950 000	450n6	750	196.5	W45x8x8x55x8f	330k6	452k6	260	196.5	380	360	45	275	40	6xM24x36
29	1 060 000	460n6	750	209	W46x8x8x56x8f	340k6	462k6	270	209	390	370	45	285	40	6xM24x36
30	1 200 000	480n6	790	209	W48x8x8x58x8f	360k6	482k6	285	209	410	385	45	300	40	6xM24x36
31	1 330 000	500n6	790	232											
32	1 500 000	510n6	850	232											
33	1 690 000	530n6	900	251											
34	1 920 000	570n6	950	251											
35	2 240 000	600n6	1000	276											
36	2 600 000	640n6	1000	276											

 ① 螺栓
 ② 空心轴孔径

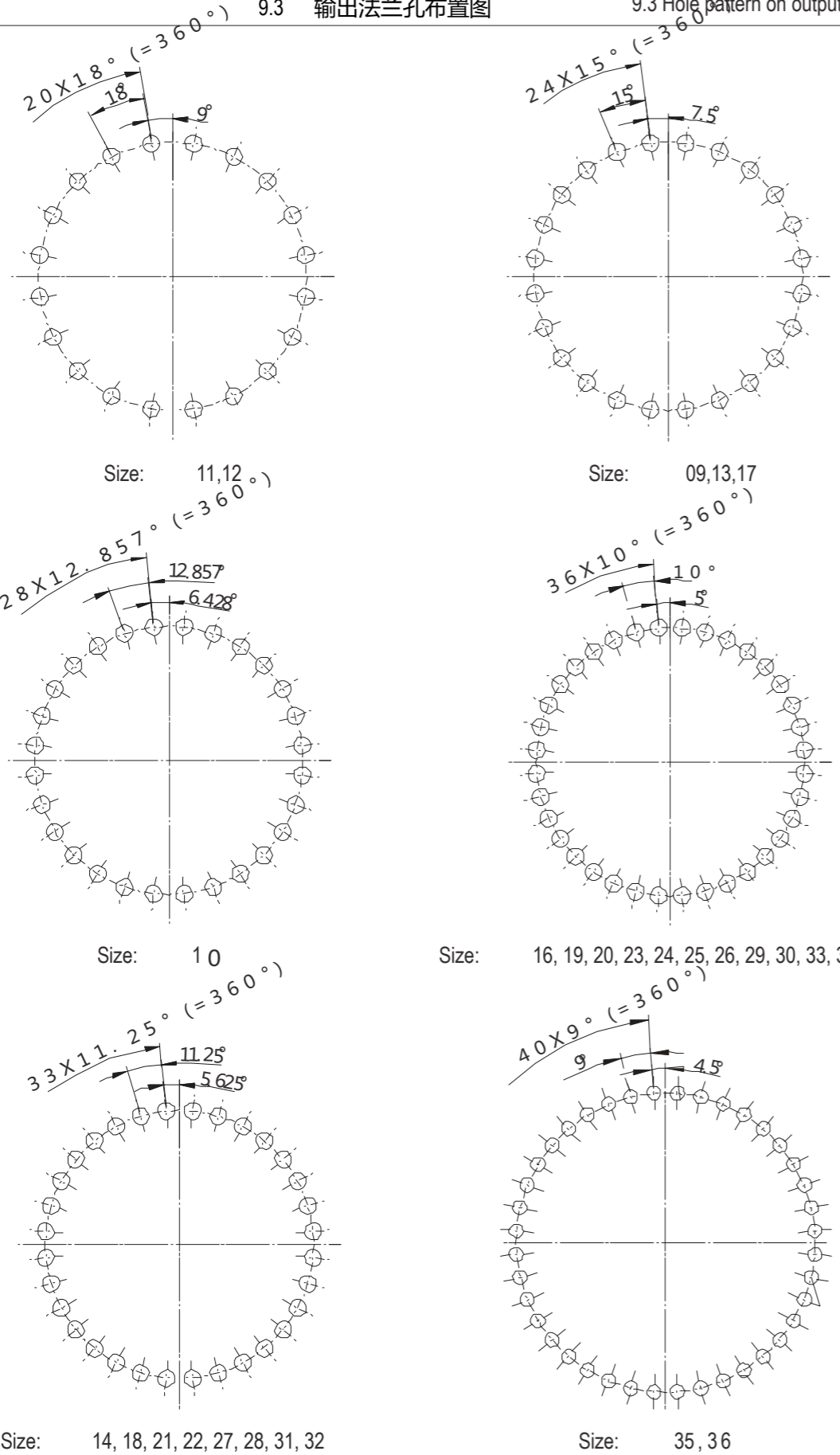
 ① Bolts
 ② Hollow shaft bore diameter

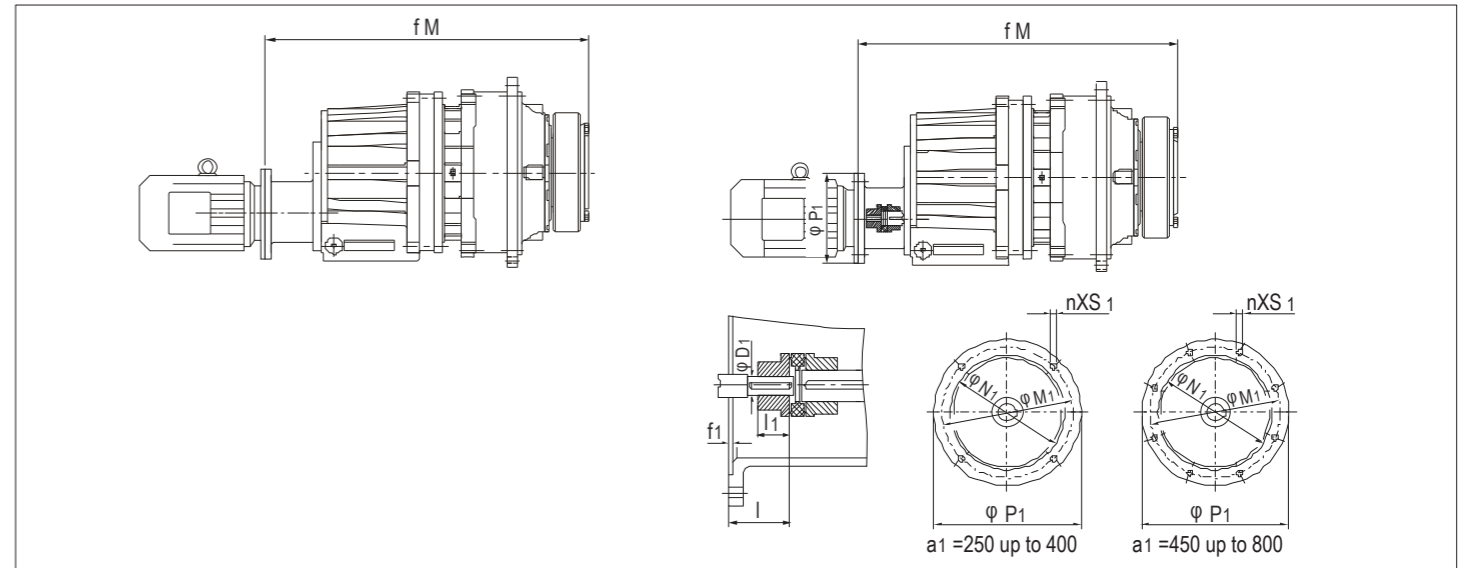
1) 带平键的轴身中心孔见 P59

1) The central hole of shaft extension, see page 59.

9.3 输出法兰孔布置图

9.3 Hole pattern on output flanges

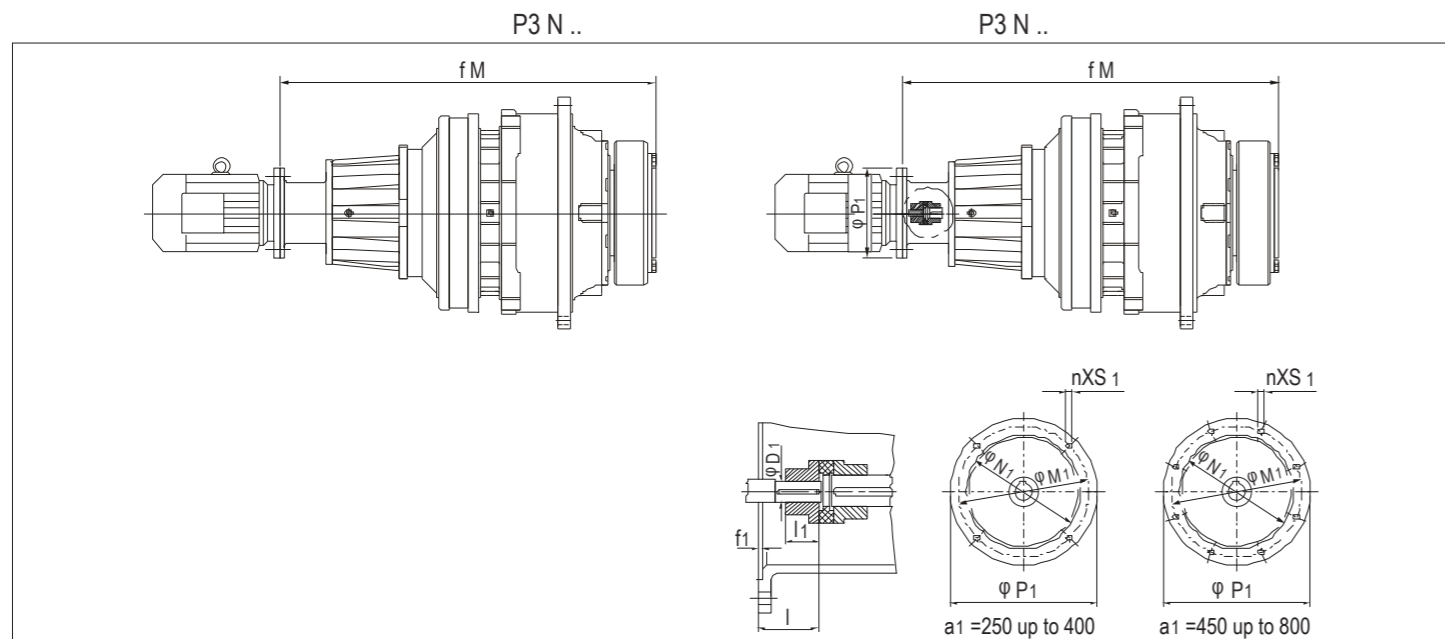

 10 法兰输入
 P 2S..

 10 Flange input
 P 2S..


P2S..	Motor (M)*	D1	f1	fM	l	l1	M1	n	N1	P1	s1
07	132	38	6	708.5	80	50	265	4	230h7	300	M12
	160	42	6	743.5	110	65	300	4	250h7	350	M16
	180	48	6	743.5	110	65	300	4	250h7	350	M16
08	132	38	6	732.5	80	50	265	4	230h7	300	M12
	160	42	6	767.5	110	65	300	4	250h7	350	M16
	180	48	6	767.5	110	65	350	4	250h7	350	M16
09	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:(*)所选直连电机机座号所对应的功率应满足传动能力表。

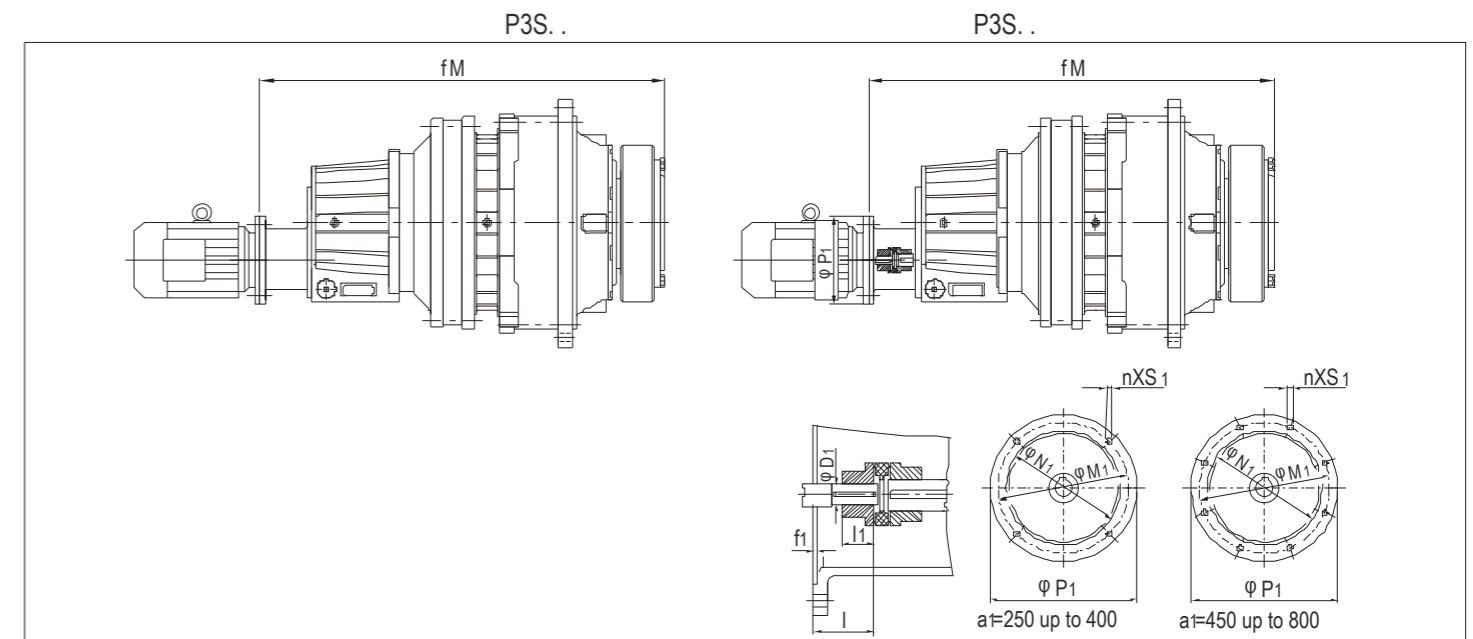
Note: (1) the power of the coupled motor in selection must be in accordance with the transmission capacity requirements.



P3N..	Motor (M)*	D ₁	f ₁	f _M	l	l ₁	M ₁	n	N ₁	P ₁	s ₁
09	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:(*)所选直连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.



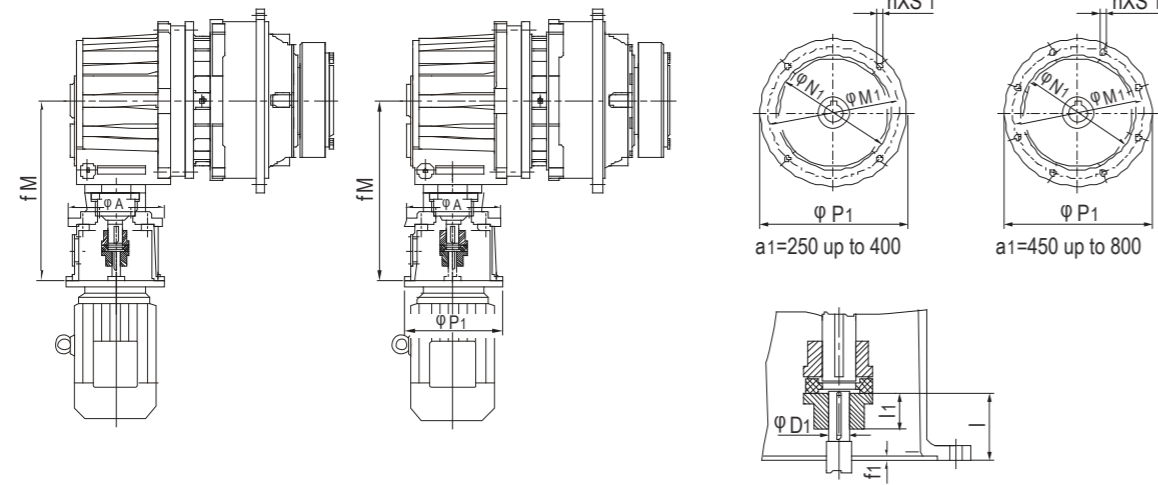
P3S..	Motor (M)*	D ₁	f ₁	f _M	l	l ₁	M ₁	n	N ₁	P ₁	S ₁
09	100	28	5	865	60	45	215	44	180 h7	250	M12
	112	28	5	865	60	45	215	44	180 h7	250	M12
	132	38	5	896	80	70	265	44	230 h7	300	M12
	160	42	6	931	110	75	300	44	250 h7	350	M16
10	100	28	5	894	60	45	215	4	180 h7	250	M12
	112	28	5	894	60	45	215	4	180 h7	250	M12
	132	38	5	925	80	70	265	4	230 h7	300	M12
	160	42	6	957	110	75	300	4	250 h7	350	M16
11	112	28	5	955	60	45	215	4	180 h7	250	M12
	132	38	5	986	80	70	265	4	230 h7	300	M12
	160	42	6	1018	110	75	300	4	250 h7	350	M16
	180	48	6	1018	110	75	300	4	250 h7	350	M16
12	112	28	5	989	60	45	215	4	180 h7	250	M12
	132	38	5	1020	80	70	265	4	230 h7	300	M12
	160	42	6	1052	110	75	300	4	250 h7	350	M16
13	180	48	6	1052	110	75	300	4	250 h7	350	M16
	132	38	5	1095	80	70	265	4	230 h7	300	M12
	160	42	6	1127	110	75	300	4	250 h7	350	M16
14	180	48	6	1127	110	75	300	4	250 h7	350	M16
	132	38	5	1155	80	70	265	4	230 h7	300	M12
	160	42	6	1187	110	75	300	4	250 h7	350	M16
16	180	48	6	1187	110	75	300	4	50 h7	350	M16
	160	42	6	1365	110	75	300	4	250 h7	350	M16
	180	48	6	1365	110	75	300	4	250 h7	350	M16
17	200	55	7	1365	110	75	350	4	300 h7	400	M16
	160	42	6	1390	110	75	300	4	250 h7	350	M16
	180	48	6	1390	110	75	300	4	250 h7	350	M16
18	200	55	7	1400	110	75	350	4	300 h7	350	M16
	180	48	6	1558.5	110	90	300	4	250 h7	350	M16
	200	55	6	1570.5	110	90	350	4	300 h7	350	M16
	225	60	7	1608.5	110	90	400	8	350 h7	450	M16
19, 20	250	65	7	1608.5	110	90	500	8	450 h7	550	M16
	180	48	6	1606	110	90	300	4	250 h7	350	M16
	200	55	6	1618	110	90	350	4	300 h7	400	M16
	225	60	7	1656	110	90	400	8	350 h7	500	M16
	250	65	7	1656	110	90	500	8	450 h7	550	M16

注:(*)所选直连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.

P 2K ..

P 2K ..



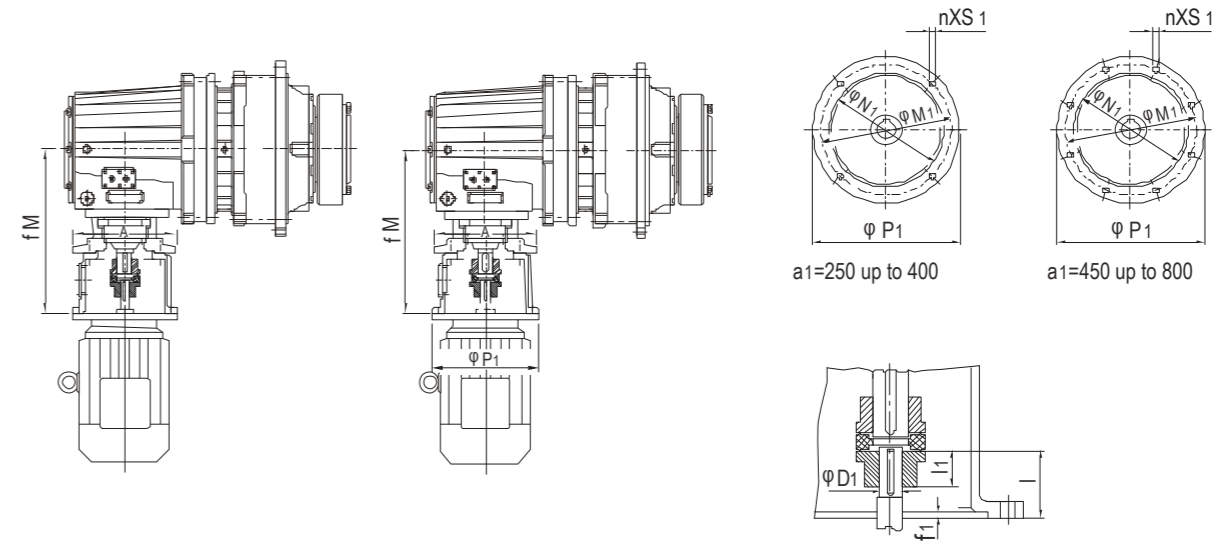
P2K..	Motor (M)*	A	D1	f1	fM	l	l1	M1	n	N1	P1	s1
07, 08	80	/	19	15	402	40	45	165	4	130h7	200	M10
	90	/	24	15	402	50	45	165	4	130h7	200	M10
	100	/	28	18	430	60	50	215	4	180h7	250	M12
	112	/	28	18	430	60	50	215	4	180h7	250	M12
	132	/	38	8	455	80	50	265	4	230h7	300	M12
09, 10	132	250	38	5	486	80	70	265	4	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	683	110	75	300	4	250h7	350	M16
	180	440	48	6	683	110	75	300	4	250h7	350	M16
	200	440	55	7	683	110	75	350	4	300h7	400	M16
	225	440	60	7	715	140	80	400	8	350h7	450	M16
	250	440	65	8	727	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	450	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：(*)所选直连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 in accordance with the transmission capacity requirements.

P 2L ..

P 2L ..



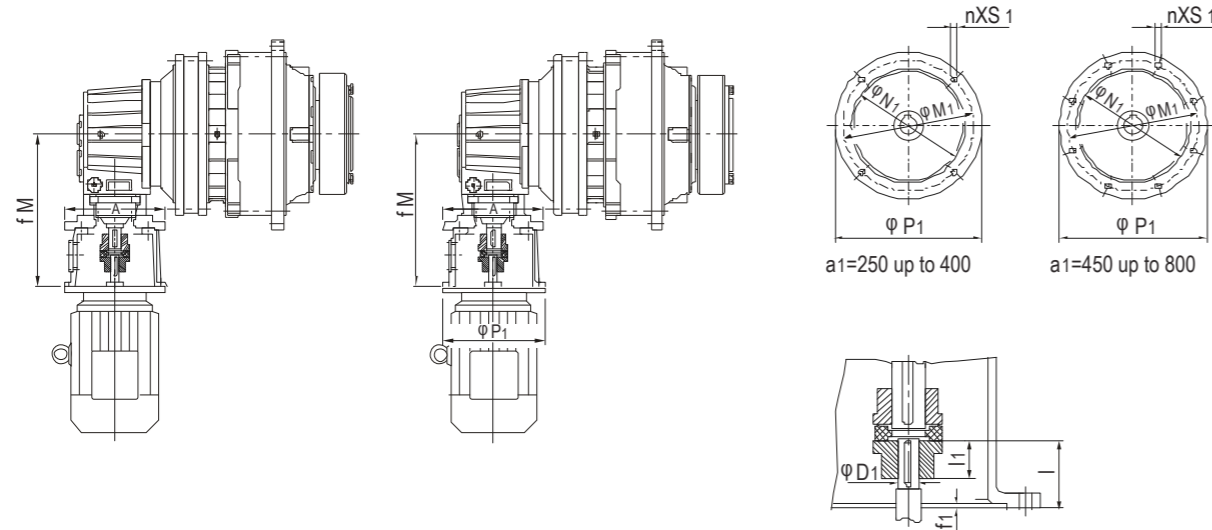
P2L..	Motor (M)*	A	D1	f1	fM	l1	l	M1	n	N1	P1	s1
07, 08	132	/	38	8	443	50	80	265	4	230h7	300	M12
	160	/	42	8	497	65	110	300	4	250h7	350	M16
	180	/	48	8	497	65	110	300	4	250h7	350	M16
09, 10	160	440	42	6	543	75	110	300	4	250h7	350	M16
	180	440	48	6	543	75	110	300	4	250h7	350	M16
	200	440	55	7	543	75	110	350	4	300h7	400	M16
11, 12	225	440	60	7	575	80	140	400	8	350h7	450	M16
	200	440	55	7	600	75	110	350	4	300h7	400	M16
	225	440	60	7	630	80	140	400	8	350h7	450	M16
13, 14	250	440	65	8	642	85	140	500	8	450h7	550	M16
	225	440	60	7	732	85	140	400	8	350h7	450	M16
	250	440	65	8	732	85	140	500	8	450h7	550	M16
16, 17	280	440	75	8	732	85	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：(*)所选直连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 in accordance with the transmission capacity requirements.

P 3K ..

P 3K ..



P3K	Motor (M) *	A	D1	f1	fM	l	l1	M1	N1	n	P1	s1
09, 10	90	/	24	5	547	50	45	300	130	4	165	M10
	100/112	/	28	6	547	60	45	300	180	4	215	M12
	132	250	38	5	486	80	70	265	230h7	4	300	M12
11, 12	90	/	24	5	547	50	45	300	130	4	165	M10
	100/112	/	28	6	547	60	45	300	180	4	215	M12
	132	250	38	5	486	80	70	265	230h7	4	300	M12
	160	250	42	6	528	110	75	300	250h7	4	350	M16
13, 14	90	/	24	5	547	50	45	300	130	4	165	M10
	100/112	/	28	6	547	60	45	300	180	4	215	M12
	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	132	350	38	5	551	80	75	265	230h7	4	300	M12
	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	65	8	812	140	85	500	450h7	8	550	M16
27, 28, 29, 30	225	440	60	7	932	140	85	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:(*)所选直连电机机座号所对应的功率应满足传动能力表。

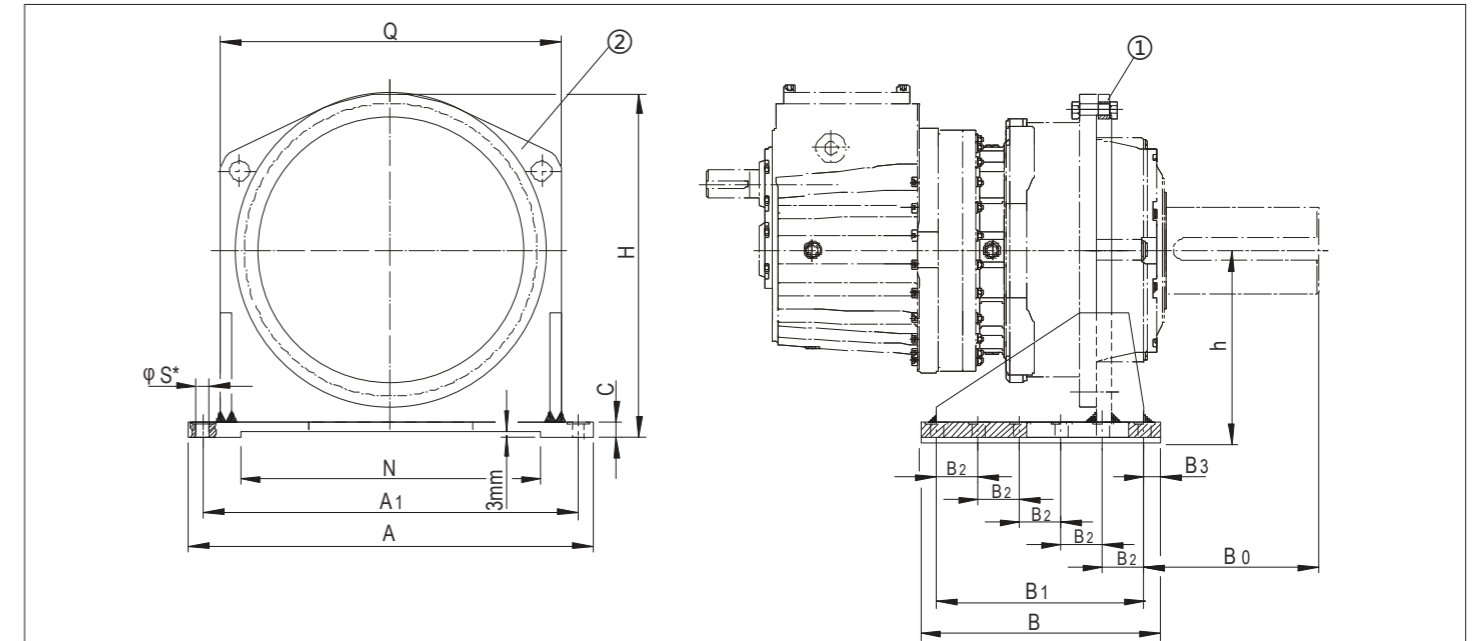
Note: (1) the power of the coupled motor in selection must meet for the transmission capacity requirements.

11 附件

11.1 输出支架 (附件代号 B42)

11 Accessories

11.1 Output Bracket (Code: B42)



Size	A	A1	B	B0	B1	B2	B3	C	h	H	N	Q	Hole		Weight (kg)
													S*	NO.	
07	470	420	270	209	210	105	30	20	220	395	280	360	22	2 x 3	26
08	510	460	290	227	230	115	30	20	240	435	400	400	22	2 x 3	32
09	580	520	330	240	260	130	35	20	260	480	380	450	26	2 x 3	56
10	630	570	360	240	290	145	35	25	280	525	430	500	26	2 x 3	82
11	680	620	400	274	330	110	35	30	315	585	480	550	26	2 x 4	122
12	760	700	450	292	380	95	35	30	360	670	560	630	26	2 x 5	157
13	820	750	490	334	420	105	35	35	390	720	610	680	26	2 x 5	213
14	920	840	560	380	480	120	40	35	430	800	680	760	33	2 x 5	270
16	980	900	580	374	500	125	40	40	470	865	700	820	33	2 x 5	350
17	1130	1040	670	405	580	145	45	45	540	998	810	940	39	2 x 5	520
18	1180	1080	720	385	620	155	50	45	560	1035	830	980	39	2 x 5	580
19	1260	1160	760	450	640	160	60	50	590	1090	880	1050	45	2 x 5	720
20	1260	1160	760	500	640	160	60	50	590	1090	880	1050	45	2 x 5	720
21	1440	1320	840	513	700	175	70	55	660	1228	1020	1170	52	2 x 5	940
22	1440	1320	840	513	700	175	70	55	660	1228	1020	1170	52	2 x 5	940
23	1540	1420	910	567	750	150	80	60	730	1345	1100	1270	52	2 x 6	1275
24	1540	1420	910	607	750	150	80	60	730	1345	1100	1270	52	2 x 6	1275
25	1700	1550	1000	574	860	215	70	65	795	1465	1240	1400	62	2 x 5	1670
26	1700	1550	1000	634	860	215	70	65	795	1465	1240	1400	62	2 x 5	1670
27	1850	1700	1100	664	950	190	75	70	870	1610	1370	1550	62	2 x 6	2170
28	1850	1700	1100	724	950	190	75	70	870	1610	1370	1550	62	2 x 6	2170
29	1980	1820	1180	731	1000	250	90	75	925	1715	1460	1640	70	2 x 5	2650
30	1980	1820	1180	771	1000	250	90	75	925	1715	1460	1640	70	2 x 5	2650
31	2150	1950	1300	773	1100	220	100	75	1000	1845	1570	1750	70	2 x 6	3100
32	2150	1950	1300	833	1100	220	100	75	1000	1845	1570	1750	70	2 x 6	3100
33	2230	2050	1350	883	1150	230	100	85	1050	1940	1630	1850	78	2 x 6	3850
34	2230	2050	1350	933	1150	230	100	85	1050	1940	1630	1850	78	2 x 6	3850
35	On request														
36	On request														

① 参阅 P54
② 输出支架 (编号: B42)

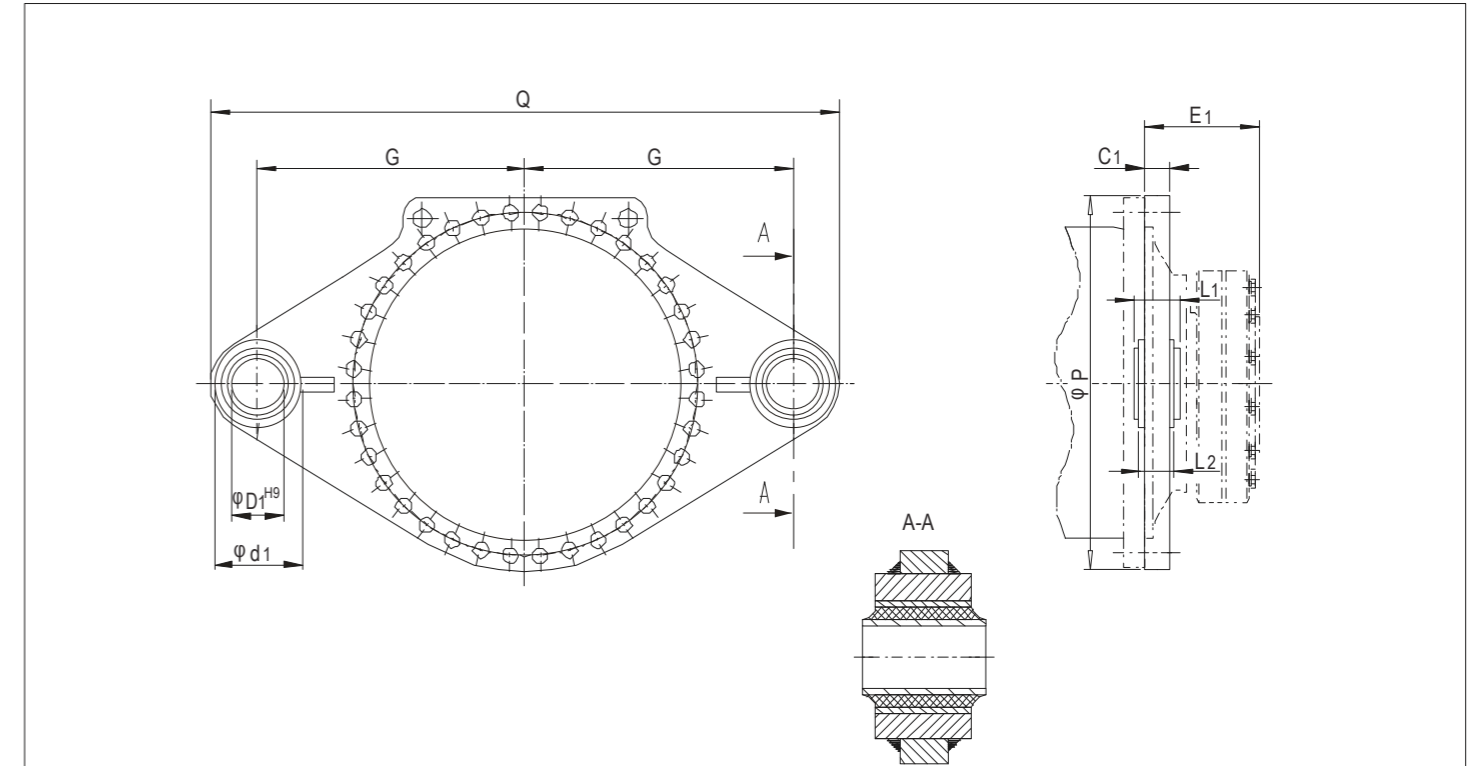
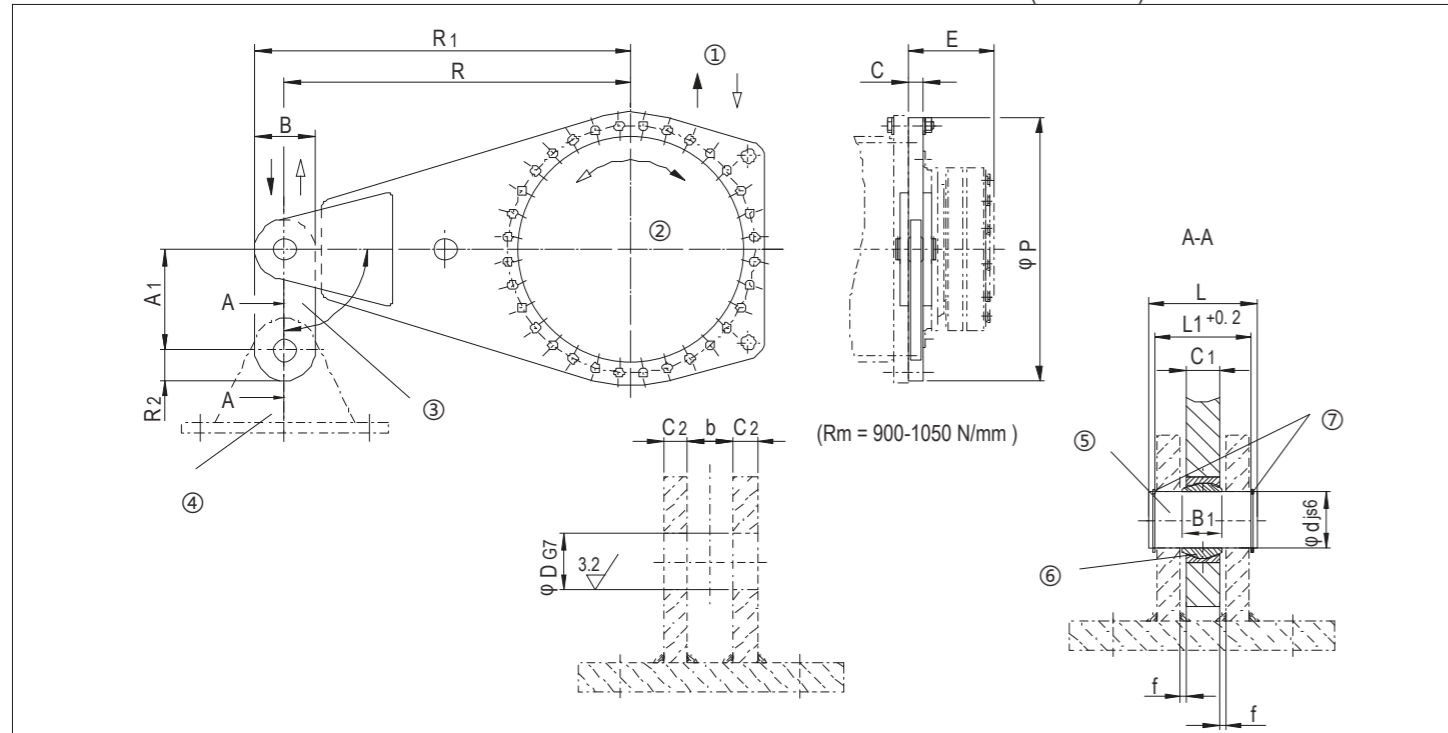
① See P54
② Output Bracket (Code: B42)

11.2 单向扭力臂 (附件代号 T71)

11.2 Torque arm on one side (code: T71)

11.3 带橡胶衬套的双向扭力臂 (附件代号 T72)

11.3 Torque arm on two sides with rubber bushes (code: T72)



Size	T2N (N·m)	A1	b	B	B1	C	C1	C2min.	d	D	E	f	L1	L	P	R	R1	R2	Weight(kg)
07	On request																		
08	On request																		
09	22 000	140	25	100		25	18	15	30	165	3.5	59.5	70	440	555	605	50	38	
09	22 000	140	25	100	22 ^{0.12}	25	18	15	30	165	3.5	59.5	70	440	555	605	50	38	
10	31 000	140	30	105	25 ^{0.12}	30	20	15	35	174	5	64.5	75	485	615	667.5	52.5	51	
11	42 000	160	30	130	28 ^{0.12}	30	22	18	40	204	4	70.5	85	540	685	750	65	82	
12	60 000	160	30	130	28 ^{0.12}	30	22	18	40	224	4	70.5	85	620	785	850	65	85	
13	83 000	180	35	145	32 ^{0.12}	35	25	20	45	241	5	79.5	95	665	840	912.5	72.5	113	
14	117 000	200	40	145	35 ^{0.12}	40	30	20	50	278	5	85	100	740	940	1012.5	72.5	145	
16	160 000	240	50	155	44 ^{0.15}	50	35	25	60	285	7.5	105	120	790	1000	1077.5	77.5	206	
17	202 000	240	50	170	44 ^{0.15}	50	35	25	60	294	7.5	105	120	915	1165	1250	85	274	
18	244 000	280	55	210	49 ^{0.15}	55	40	30	70	303	7.5	120	135	955	1210	1315	105	365	
19	295 000	320	60	210	55 ^{0.15}	60	45	30	80	327.5	7.5	125	145	1005	1300	1405	105	423	
20	354 000	320	60	210	55 ^{0.15}	60	45	30	80	327.5	7.5	125	145	1005	1300	1405	105	423	
21	392 000	320	60	225	55 ^{0.15}	60	45	30	80	354	7.5	125	145	1140	1450	1562.5	113	530	
22	450 000	320	60	225	55 ^{0.15}	60	45	30	80	354	7.5	125	145	1140	1450	1562.5	113	530	
23	513 000	360	65	250	60 ^{0.20}	65	50	30	90	380	7.5	130	150	1235	1575	1700	125	665	
24	592 000	360	65	250	60 ^{0.20}	65	50	30	90	380	7.5	130	150	1235	1575	1700	125	665	
25	684 000	400	75	275	70 ^{0.20}	75	55	35	100	407	10	150	170	1350	1720	1857.5	138	940	
26	763 000	400	75	275	70 ^{0.20}	75	55	35	100	407	10	150	170	1350	1720	1857.5	138	940	
27	852 000	440	75	300	70 ^{0.20}	75	55	35	110	453	10	150	175	1490	1900	2050	150	1120	
28	950 000	440	75	300	70 ^{0.20}	75	55	35	110	453	10	150	175	1490	1900	2050	150	1120	
29	1 060 000	440	75	315	70 ^{0.20}	75	55	35	110	483	10	150	175	1600	2035	2192.5	158	1260	
30	1 200 000	440	75	315	70 ^{0.20}	75	55	35	110	483	10	150	175	1600	2035	2192.5	158	1260	
31-36	On request																		

Size	T2N (N·m)	C1	d1	D1	E1	G	L1	L2	P	Q	Weight (kg)
07	On request										
08	On request										
09	22 000	30	115	50h8	165	500	110	100	440	1140	58
10	31 000	30	115	50h8	174	550	110	100	485	1240	72
11	42 000	30	180	100h8	204	575	120	110	540	1355	95
12	60 000	35	180	100h8	224	625	120	110	620	1455	120
13	83 000	35	210	110h8	241	600	180	170	665	1435	145
14	117 000	40	210	110h8	278	650	180	170	740	1535	170
16	160 000	40	240	124h8	285	700	230	220	790	1670	230
17	202 000	40	240	124h8	294	750	230	220	915	1770	300
18	244 000	50	240	124h8	303	900	230	220	955	2070	400

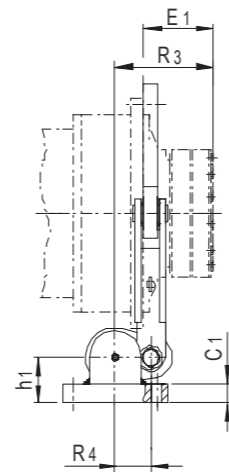
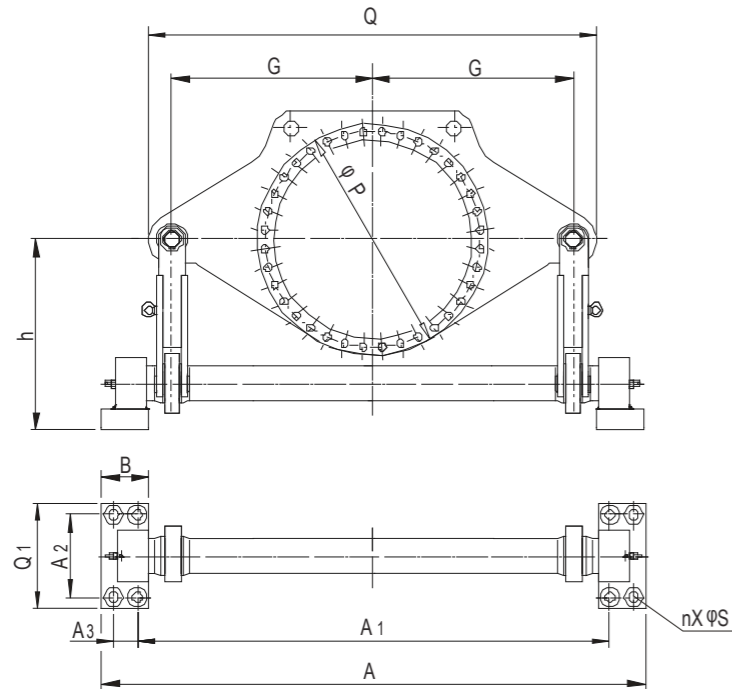
在运输时扭力臂附件没有与行星齿轮箱装配,到货后由客户自行安装。

- ① 受力方向
 ② 面对输出轴看时的旋转方向
 ③ 联接曲柄 ④ 支架 ⑤ 材料
 ⑥ 向心关节轴承 ⑦ 弹性挡圈

The Accessories of torque arm should be installed by the customers as it is delivered separately with the gearbox.

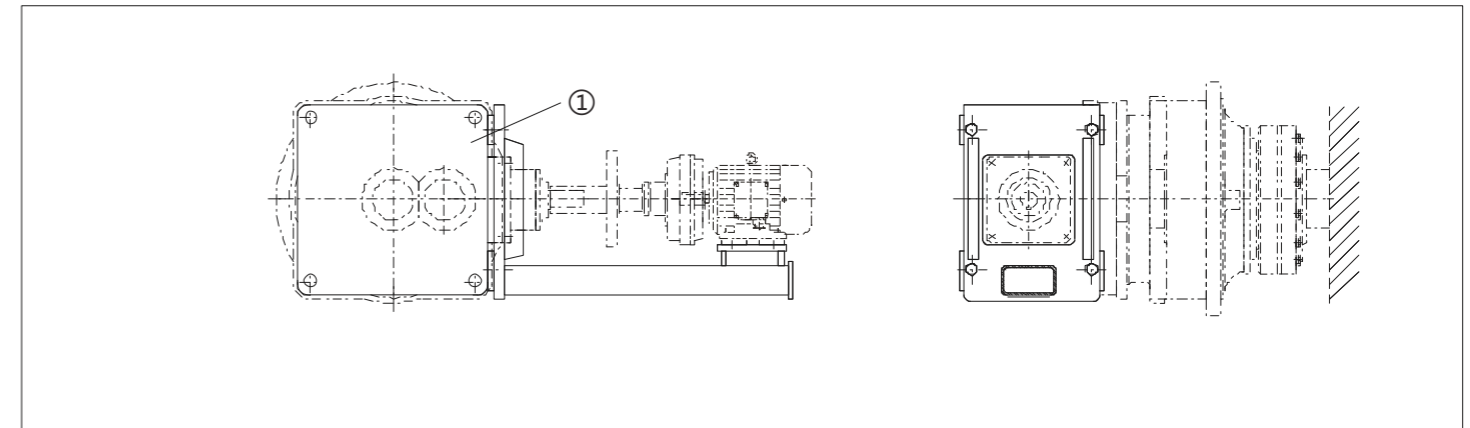
- ① Direction of force
 ② Direction of rotation, facing the output shaft
 ③ Coupling bar ④ Support ⑤ Material
 ⑥ Self-aligning plain bearing ⑦ Circlip

11.4 扭转轴支架 (附件代号 B41)

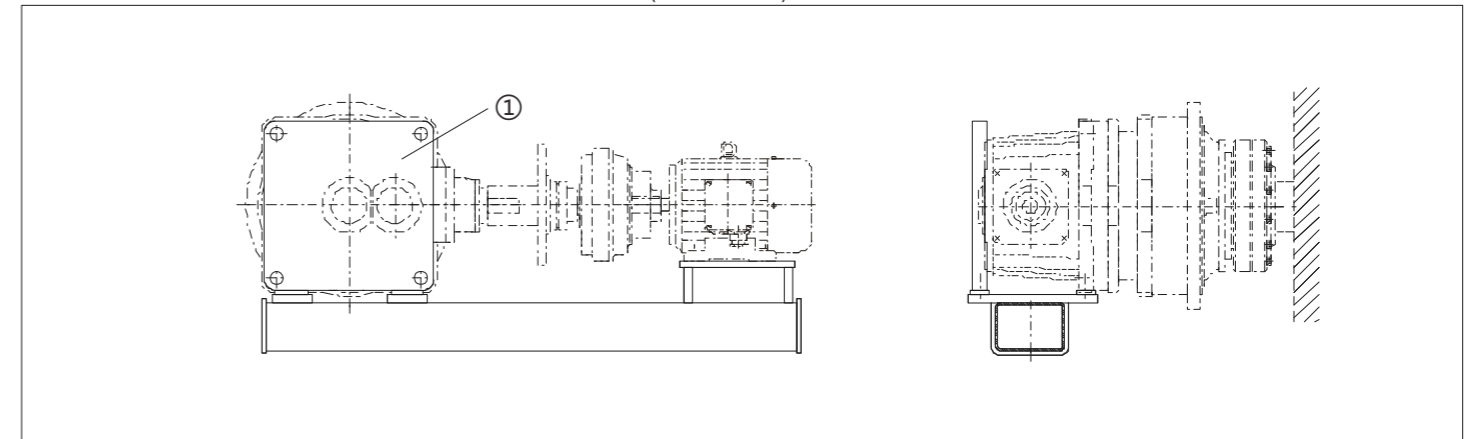
 11.4 Torsion shaft support
 (code: B41)


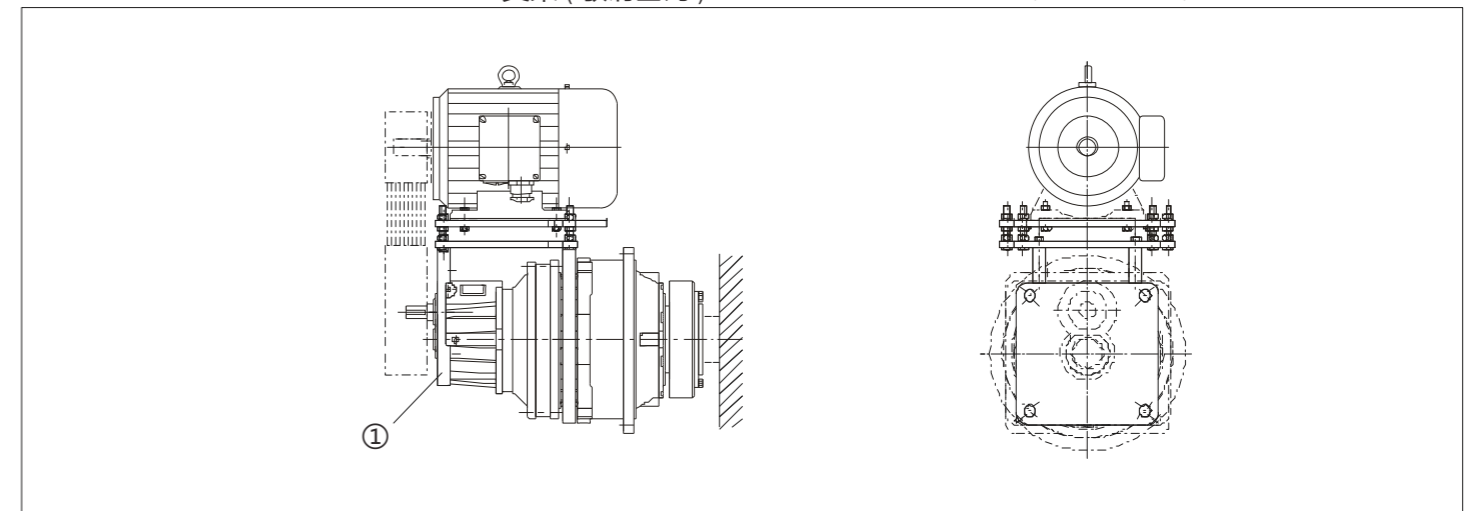
Size	T2N (N·m)	A	A1	A2	A3	B	C1	E1	G	h	h1	n	P	Q	Q1	R3	R4	S	Weight (Kg)
07	On request																		
08	On request																		
09	22 000	1619	1414	250	65	140	48.5	165	550	560	120	8	610	1230	330	247.5	105	33	300
10	31 000	1619	1414	250	65	140	48.5	174	550	560	120	8	610	1230	330	256.5	105	33	300
11	42 000	1619	1414	250	65	140	48.5	204	550	560	120	8	610	1230	330	286.5	105	33	300
12	60 000	1619	1414	250	65	140	48.5	224	550	560	120	8	610	1230	330	306.5	105	33	300
13	83 000	1837	1604	280	75	158	68.5	241	650	620	155	8	775	1450	380	358.5	145	39	600
14	117 000	1837	1604	280	75	158	68.5	278	650	620	155	8	775	1450	380	395.5	145	39	600
16	160 000	1837	1604	280	75	158	68.5	285	650	620	155	8	775	1450	380	402.5	145	39	600
17	202 000	2041	1777	315	84	180	73.5	294	750	700	170	8	955	1680	400	431.5	165	39	900
18	244 000	2041	1777	315	84	180	73.5	303	750	700	170	8	955	1680	400	440.5	165	39	900
19	295 000	2300	2000	350	100	200	83.5	328	850	860	195	8	985	1900	450	470.5	175	45	1400
20	354 000	2300	2000	350	100	200	83.5	328	850	860	195	8	985	1900	450	470.5	175	45	1400
21	392 000	2591	2254	400	113	225	88.5	354	950	900	210	8	1120	2110	530	506.5	190	45	1700
22	450 000	2591	2254	400	113	225	88.5	354	950	900	210	8	1120	2110	530	506.5	190	45	1700
23	513 000	2871	2496	450	125	250	98.5	380	1063	1060	235	8	1215	2385	590	562.5	220	45	2150
24	592 000	2871	2496	450	125	250	98.5	380	1063	1060	235	8	1215	2385	590	562.5	220	45	2150
25	684 000	3236	2816	500	140	280	118.5	407	1150	1200	275	8	1350	2600	650	614.5	245	52	2700
26	763 000	3236	2816	500	140	280	118.5	407	1150	1200	275	8	1350	2600	650	614.5	245	52	2700
27	852 000	3327	2887	530	150	290	128.5	453	1250	1250	300	8	1490	2820	700	670.5	255	52	3400
28	950 000	3327	2887	530	150	290	128.5	453	1250	1250	300	8	1490	2820	700	670.5	255	52	3400
29	1 060 000	3673	3200	560	158	315	128.5	483	1360	1350	300	8	1565	3080	750	718	280	62	4350
30	1 200 000	3673	3200	560	158	315	128.5	483	1360	1350	300	8	1565	3080	750	718	280	62	4350
31	1 330 000	3906	3408	590	168	330	148.5	538	1450	1400	340	8	1695	3260	790	788	300	70	5500
32	1 500 000	3906	3408	590	168	330	148.5	538	1450	1400	340	8	1695	3260	790	788	300	70	5500
33	1 680 000	4116	3588	620	178	350	158.5	573	1550	1500	375	8	1785	3520	840	840.5	320	70	7000
34	1 920 000	4116	3588	620	178	350	158.5	573	1550	1500	375	8	1785	3520	840	840.5	320	70	7000
35-36	On request																		

 11.5 电机安装支架
 P.K.,P.L.. 立式安装带输入电机安装架 (敬请垂询)

 11.5 Motor bracket
 Motor bracket for P.K., P.L..
 vertical mounting(please consult)


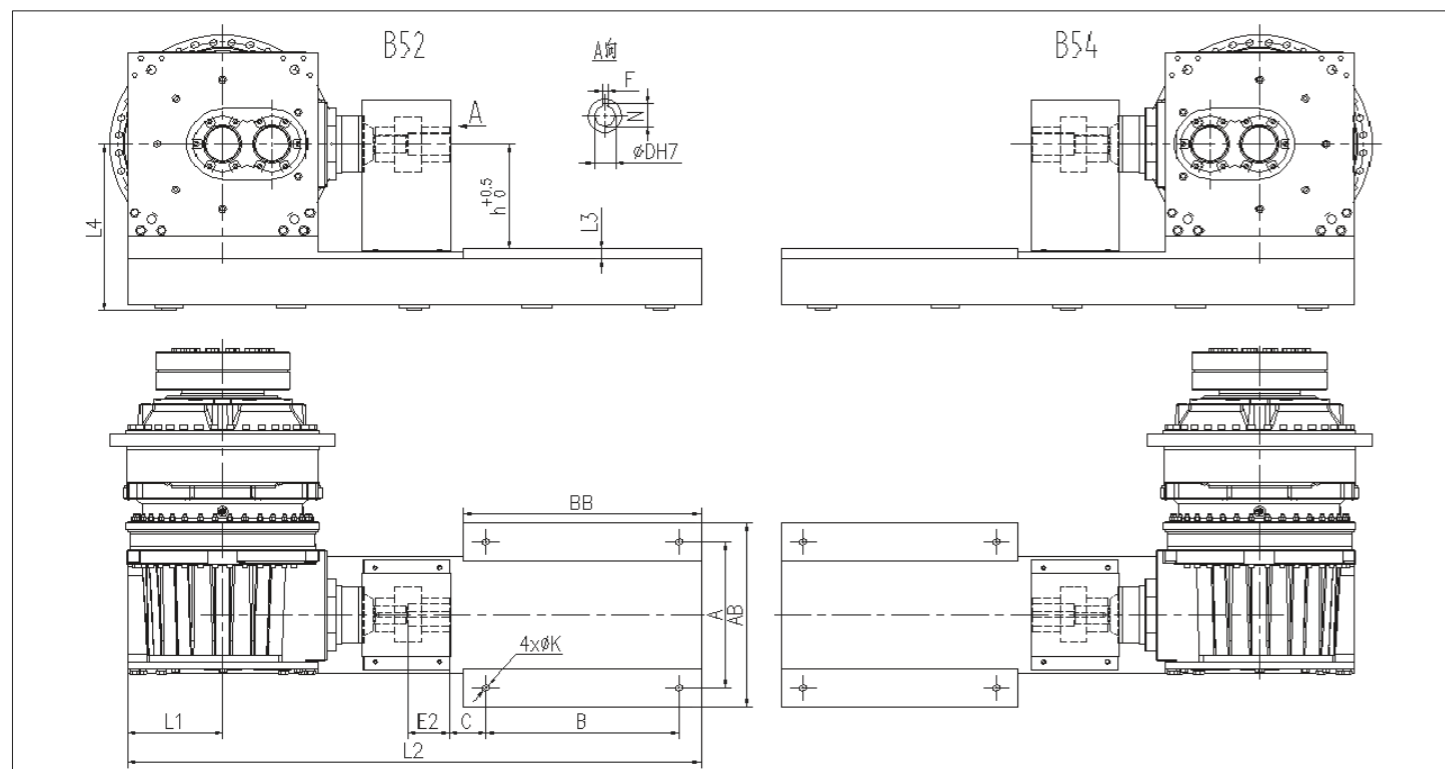
P.K.,P.L.. 水平安装时的电机机架 (敬请垂询)

 Motor bracket for P.K., P.L..
 horizontal mounting(please consult)

 卧式电机安装
 支架 (敬请垂询)

 Brackets for horizontal
 motor(please consult)


① 连接法兰

① Adapter flange



P2K..	TV	h	D	E2	F	N	A	B	C	AB	BB	K	L1	L2	L3	L4
13, 14	180	180	48	110	14	51.8	279	241/279	121	535	560	15	254	1660	30	535
	200	200	55	110	16	59.3	318	305	133	535	560	19	254	1660	30	535
	225	225	60	140	18	64.4	356	286/311	149	535	560	19	254	1660	30	535
	250	250	65	140	18	69.4	406	349	168	535	560	24	254	1660	30	535
16, 17	280	280	75	140	20	79.9	457	368/419	190	555	580	24	254	1660	75	535
	200	200	55	110	16	59.3	318	305	133	600	670	19	324	1960	30	580
	225	225	60	140	18	64.4	356	286/311	149	600	670	19	324	1960	30	580
	250	250	65	140	18	69.4	406	349	168	600	670	24	324	1960	30	580
18, 19, 20	280	280	75	140	20	79.9	457	368/419	190	600	670	24	324	1960	30	580
	315	315	80	170	22	85.4	508	406/457/508	216	640	690	28	324	1960	85	580
	225	225	60	140	18	64.4	356	286/311	149	710	690	19	385	2140	30	655
21, 22	250	250	65	140	18	69.4	406	349	168	710	690	24	385	2140	30	655
	280	280	75	140	20	79.9	457	368/419	190	710	690	24	385	2140	30	655
21, 22	315	315	80	170	22	85.4	508	406/457/508	216	710	690	28	385	2140	40	655
	280	280	75	140	20	79.9	457	368/419	190	710	690	24	425	2370	30	697
21, 22	315	315	80	170	22	85.4	508	406/457/508	216	710	690	28	425	2370	40	697

P3K..	TV	h	D	E2	F	N	A	B	C	AB	BB	K	L1	L2	L3	L4
16, 17	180	180	48	110	14	51.8	279	241/279	121	445	440	15	220	1360	30	405
	200	200	55	110	16	59.3	318	305	133	445	440	19	220	1360	30	405
	225	225	60	140	18	64.4	356	286/311	149	445	440	19	220	1360	66	405
18, 19, 20	200	200	55	110	16	59.3	318	305	133	535	560	19	254	1660	30	535
	225	225	60	140	18	64.4	356	286/311	149	535	560	19	254	1660	30	535
	250	250	65	140	18	69.4	406	349	168	535	560	24	254	1660	30	535
21, 22	280	280	75	140	20	79.9	457	368/419	190	555	580	24	254	1660	75	535
	250	250	65	140	18	69.4	406	349	168	535	560	24	254	1660	30	535
23, 24	280	280	75	140	20	79.9	457	368/419	190	600	670	24	324	1960	30	580
	315	315	80	170	22	85.4	508	406/457/508	216	640	690	28	324	1960	85	580

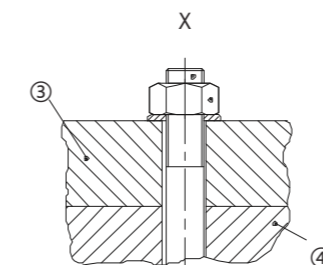
注：(1) 所选电机机座号对应的功率应满足传动能力。

Note (1) The power of the coupled motor in selection must meet for the transmission capacity requirements.

11.6 预紧扭矩

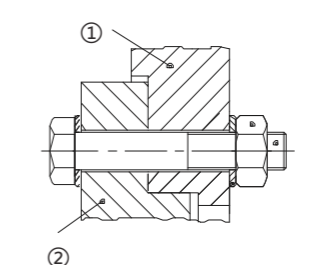
11.6 Tightening torques

法兰联接及底座安装时螺母的预紧扭矩。



① 扭力臂或机座
② 齿轮箱法兰
③ 机座
④ 安装基础件

Tightening torques for flange connections and foot-mounted design.

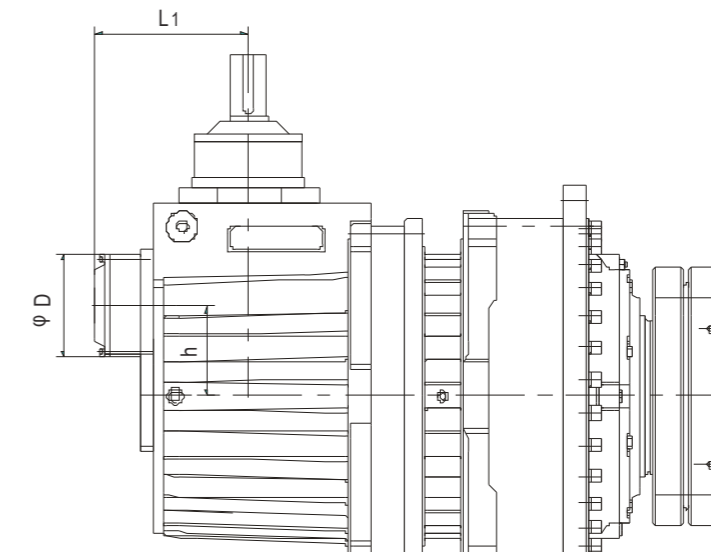


① Torque arm or housing base
② Gearbox flange
③ Housing base
④ Foundation

Size	Flange		Base	
	Bolt (10.9)	Tightening torque (N·m)	Bolt (8.8)	Tightening torque (N·m)
07	M16	295	M20	400
08	M16	295	M20	400
09	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	M72X6	20800

11.7 逆止器 (附件代号 B11)

11.7 Backstop (Code: B11)



Size	L1	D	h
P2K07	165	95	76
P2K08	165	95	76
P2K09	185	125	90
P2K10	185	125	90
P2K11	205	150	115
P2K12	205	150	115
P2K13	265	175	140
P2K14	265	175	140
P2K16	290	190	170
P2K17	290	190	170
P2K18	345	230	200
P2K19	345	230	200
P2K20	345	230	200
P3K09	185	125	90
P3K10	185	125	90
P3K11	185	125	90
P3K12	185	125	90
P3K13	185	125	90
P3K14	185	125	90
P3K16	205	150	115
P3K17	205	150	115
P3K18	265	175	140
P3K19	265	175	140
P3K20	265	175	140
P3K21	265	175	140
P3K22	265	175	140
P3K23	290	190	170
P3K24	290	190	170
P3K25	290	190	170
P3K26	290	190	170
P3K27	345	230	200
P3K28	345	230	200
P3K29	345	230	200
P3K30	345	230	200

11.7 润滑油

11.7 Oil

Oil level (L)							
Size	P2N..	P2L..	P2S..	P2K..	P3N..	P3..S	P3K..
07	5	5	5	5	/	/	/
08	5.5	5.5	5.5	5.5	/	/	/
09	6	6	6	6	7	7	7
10	8	8	8	8	9	9	9
11	12	12	12	12	13	13	15
12	16	16	16	16	17	17	20
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		115	115	115
22	95	95	95		105	105	105
23	150	150	150		155	155	155
24	125	125	125		135	135	135
25	190	190	190		195	195	195
26	160	160	160		170	170	170
27	245	245	245		250	250	250
28	205	205	205		220	220	220
29	305	305	305		310	310	310
30	255	255	255		280	280	280
31	380		380		390	390	
32	315		315		360	360	
33	460		460		470	470	
34	380		380		430	430	
35	645		645				
36	535		535				

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

2)以上齿轮箱油量为 P.N.在 B5安装方
位, P.K/P.L/P.S.为B53安装方位时的油
量, 其他安装方位的油量约为表格对应
数据的两倍作为参考值。

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

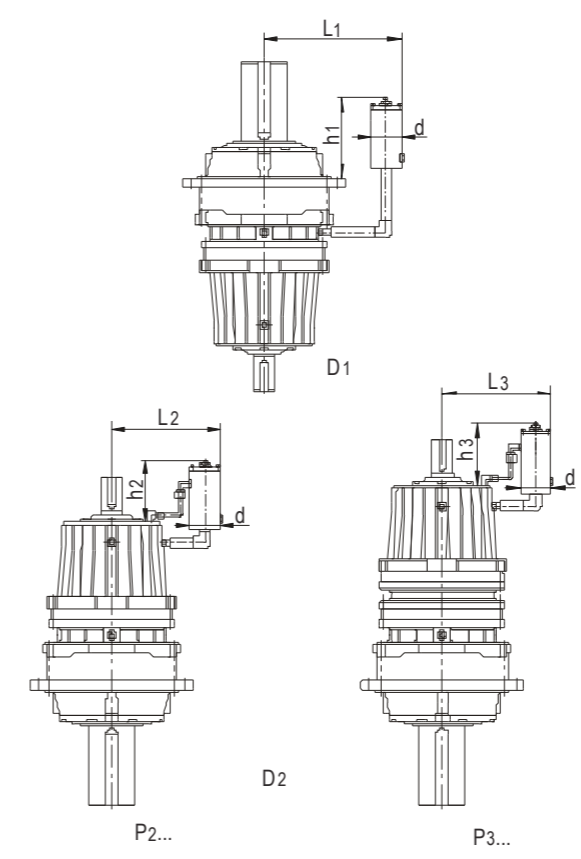
2)The above oil levels are for P..N in
mounting position B5 and P.K/P.L/P.S in
mounting position B53. Other positions
approximately twice as much the correspond
-ing data in the table as a reference value .

11.8 润滑方式

11.8.1 P.N.,P.S.. 在安装方位 V1、 V11、
V3、 V31 时采用补偿油箱浸油润滑
(附件代号 S43)

11.8 Lubrication System

11.8.1 Oil compensating tank for vertical
mounting positions V1,V11,V3,V31 of
P.N.. and P.S..(code S43)



Size	L1	L2	L3	h1	h2	h3	d
07	295	250	/	193	183	/	φ 80
08	295	250	/	193	183	/	φ 80
09	345	285	285	210	160	160	φ 80
10	375	285	285	210	160	160	φ 80
11	400	320	285	210	160	160	φ 80
12	435	320	285	210	160	160	φ 80
13	500	400	285	250	180	160	φ 120
14	530	400	285	250	180	160	φ 120
16	555	450	320	250	180	180	φ 120
17	620	450	320	250	180	180	φ 120
18	635	500	400	250	180	180	φ 120
19	650	500	400	250	180	180	φ 120
20	650	500	400	250	180	180	φ 120
21	730	550	400	250	180	180	φ 120
22	730	550	400	250	180	180	φ 120
23	780	550	450	250	180	180	φ 120
24	780	550	450	250	185	180	φ 120
25-36	On request						

11.8.2 P.K.,P.L. 安装方位为 B51 时, 需配备电动泵强制循环润滑: (附件代号 S32)

11.8.2 Forced lubrication with motor pump for P.K., P.L. and P.S.21-P.S.36 in mounting position B51:(accessory code S32)

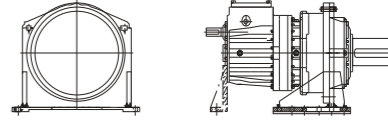
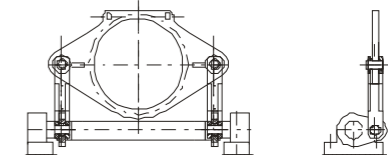
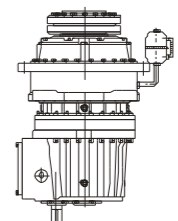
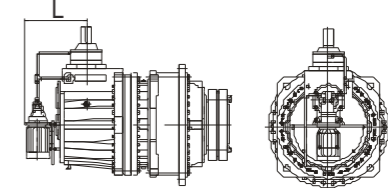
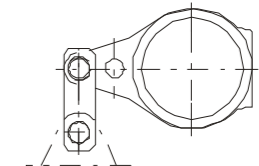
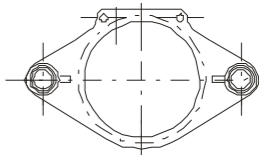
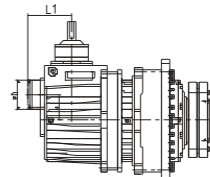
Size	L	Motor pump size	Size	L	Motor pump size
P2K07	326	CB-B6JC	P3K07	/	/
P2K08	326	CB-B6JC	P3K08	/	/
P2L07	355	CB-B6JC			
P2L08	355	CB-B6JC			
P2K09	335	CB-B6JZ	P3K09	335	CB-B6JZ
P2K10	335	CB-B6JZ	P3K10	335	CB-B6JZ
P2K11	335	CB-B6JZ	P3K11	335	CB-B6JZ
P2K12	335	CB-B6JZ	P3K12	335	CB-B6JZ
P2K13	425	CB-B10JZ	P3K13	335	CB-B6JZ
P2K14	425	CB-B10JZ	P3K14	335	CB-B6JZ
P2K16	445	CB-B10JZ	P3K16	335	CB-B6JZ
P2K17	445	CB-B10JZ	P3K17	445	CB-B10JZ
P2K18	495	CB-B10JZ	P3K18	445	CB-B10JZ
P2K19	495	CB-B10JZ	P3K19	445	CB-B10JZ
P2K20	495	CB-B10JZ	P3K20	445	CB-B10JZ
P2L09	400	CB-B6JZ	P3K21	445	CB-B10JZ
P2L10	400	CB-B6JZ	P3K22	445	CB-B10JZ
P2L11	425	CB-B6JZ	P3K23	495	CB-B10JZ
P2L12	425	CB-B6JZ	P3K24	495	CB-B10JZ
P2L13	500	CB-B10JZ	P3K25	495	CB-B10JZ
P2L14	500	CB-B10JZ	P3K26	495	CB-B10JZ
P2L16	545	CB-B10JZ	P3K27	495	CB-B10JZ
P2L17	545	CB-B10JZ	P3K28	495	CB-B10JZ
P2L18	600	CB-B10JZ	P3K29	495	CB-B10JZ
P2L19	600	CB-B10JZ	P3K30	495	CB-B10JZ
P2L20	600	CB-B10JZ			
P2L21	650	CB-B10JZ			
P2L22	650	CB-B10JZ			
P2L23	725	CB-B10JZ			
P2L24	725	CB-B10JZ			

注: 安装方位, 请参阅 P3.11.9 其它型号行星齿轮箱在其它安装方位时均采用油池飞溅润滑:
 注意: 选用润滑方式时, 应校核齿轮箱热容量, 特别是补偿油箱浸油润滑。

Note: For mounting positions, see P3.11.9.3 Planetary gearbox in other mounting positions are usually lubricated with splash lubrication system
 Note: Verify the thermal capacity of the gearbox when selecting the lubrication systems, especially the mode of oil compensating tank.

11.9 附件代号

11.9 Accessory Codes

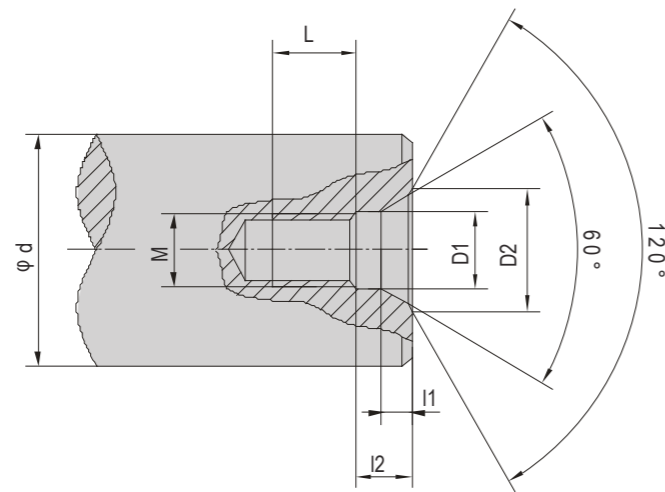
代号 Symbol	附件 Accessories	示例 Examples	页码 Page
B42	输出支架 Output bracket		P47
B41	扭转轴支架 Torsion shaft support		P50
S43	润滑油补偿槽 Oil compensating tank, dip lubrication		P54
S32	电机油泵强制润滑 Motor pump, forced lubrication		P55
T71	扭力臂 (单向) Torque arm (on one side)		P48
T72	扭力臂 (双向) Torque arm (on both sides)		P49
B11	逆止器 Backstop		P52

12 轴端中心孔

12.1 轴端 C 型螺纹的中心孔尺寸表

12 Screw hole in shaft end

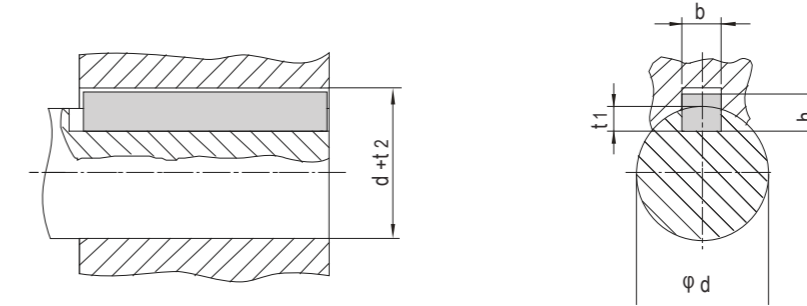
12.1 Type C screw central hole in shaft end



d	M	L	12	11	D1	D2
7 < d ≤ 10	M3	10	2.6	1.8	3.2	5.8
10 < d ≤ 13	M4	10	3.2	2.1	4.3	7.4
13 < d ≤ 16	M5	10	4	2.4	5.3	8.8
16 < d ≤ 21	M6	12	5	2.8	6.4	10.5
21 < d ≤ 24	M8	12	6	3.3	8.4	13.2
24 < d ≤ 30	M10	15	7.5	3.8	10.5	16.3
30 < d ≤ 38	M12	20	9.5	4.4	13	19.8
38 < d ≤ 50	M16	25	12	5.2	17	25.3
50 < d ≤ 85	M20	30	15	6.4	21	31.3
85 < d ≤ 130	M24	35	18	8	26	38
130 < d ≤ 225	M30	45	18	11	31	48
225 < d ≤ 330	M36	55	22	15	37	60
330 < d ≤ 360	M42	60	26	19	43	71

13 平键与键槽的尺寸

13 Parallel keys and keyway



d	b	h	t1	d + t2
8 < d ≤ 10	3	3	1.8	d + 1.4
10 < d ≤ 12	4	4	2.5	d + 1.8
12 < d ≤ 17	5	5	3	d + 2.3
17 < d ≤ 22	6	6	3.5	d + 2.8
22 < d ≤ 30	8	7	4	d + 3.3
30 < d ≤ 38	10	8	5	d + 3.3
38 < d ≤ 44	12	8	5	d + 3.3
44 < d ≤ 50	14	9	5.5	d + 3.8
50 < d ≤ 58	16	10	6	d + 4.3
58 < d ≤ 65	18	11	7	d + 4.4
65 < d ≤ 75	20	12	7.5	d + 4.9
75 < d ≤ 85	22	14	9	d + 5.4
85 < d ≤ 95	25	14	9	d + 5.4
95 < d ≤ 110	28	16	10	d + 6.4
110 < d ≤ 130	32	18	11	d + 7.4
130 < d ≤ 150	36	20	12	d + 8.4
150 < d ≤ 170	40	22	13	d + 9.4
170 < d ≤ 200	45	25	15	d + 10.4
200 < d ≤ 230	50	28	17	d + 11.4
230 < d ≤ 260	56	32	20	d + 12.4
260 < d ≤ 290	63	32	20	d + 12.4
290 < d ≤ 330	70	36	22	d + 14.4
330 < d ≤ 380	80	40	25	d + 15.4
380 < d ≤ 440	90	45	28	d + 17.4
440 < d ≤ 500	100	50	31	d + 19.5
500 < d ≤ 560	110	56	34.3	d + 22.2
560 < d ≤ 640	120	63	39	d + 24.5

随着技术迭代进步, 博能产品样本将会同步更新, 请见谅。
 Along with the technology advancedet.,the product of
 the manual of Boneng will be changed,please forgive.

控制层 CONTROL

驱动层 DRIVE

马达层 MOTOR

齿轮层 GEAR



X3010 PLC
EtherCAT&Modbus
24VDC



X3050 运动控制器
Motion Controller
EtherCAT&Modbus
24VDC

C/F/K/S-M
*...D
马达分布式
变频驱动器
Integrated
Gearmotor
Drive



EtherCAT&
Modbus
380~480VAC
0.25~3kW
i=4~355

AM 变频器
Variable Frequency Drive



Modbus
380~480VAC
0.75~5.5kW

A1 变频器
Variable Frequency Drive



Modbus/CANopen
/PROFINET
380~480VAC
0.75~250kW

C/F/K/S/R
齿轮马达
Gearmotor



380~480VAC
0.09~200kW
i=1.25~500

MP/MU/MA
三相交流异步马达
Asynchronous Motor



380~480VAC
0.09~90kW
960/1450r/min
1160/1750r/min

HB/BE/HK
齿轮箱
Gearbox



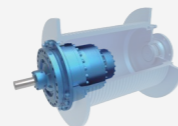
4.2~15775kW
i=5.6~450

P/PK
行星齿轮箱
Planetary
Gearbox



0.4~14000kW
i=25~4000

PW
行星齿轮箱
Planetary
Winch
Gearbox



1~1810kW
i=13~940

PS
行星齿轮箱
Planetary
Slewing
Gearbox



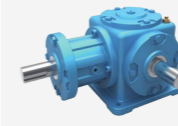
1~1626kW
i=14~947

J/JB
升降机
Jack



0.35~22.63kW
i=5~34

T
转向箱
Spiral Bevel
Gearbox



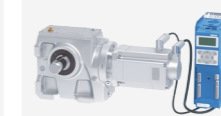
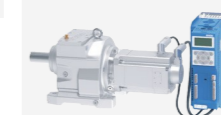
0.08~303kW
i=1:1~3:1

MX&AX
伺服马达 & 伺服
驱动器
Permanent
Magnet
Servo Motor
& Servo Drive



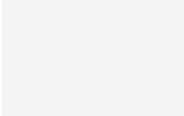
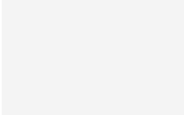
EtherCAT/
PROFINET
380~480VAC
0.28~14kW
1500/2000r/min
3000/4500r/min

C/F/K/S-MX
& AX 齿轮伺
服马达 & 伺
服驱动器
Servo
Gearmotor
& Servo Drive



EtherCAT/
PROFINET
380~480VAC
0.28~14kW
i=1.25~315

PX-MX&AX PN-MN&AN
行星伺服马达 & 行星伺服驱动器
Planetary
Precision Gear
Servo Motor
& Servo Drive



EtherCAT/
PROFINET
380~480VAC
0.38~14kW
i=3~100

行星伺服马达 & 行星伺服驱动器
Planetary
Precision Gear
Servo Motor
& Servo Drive



EtherCAT
380~480VAC
0.28~5.03kW
i=3~100