



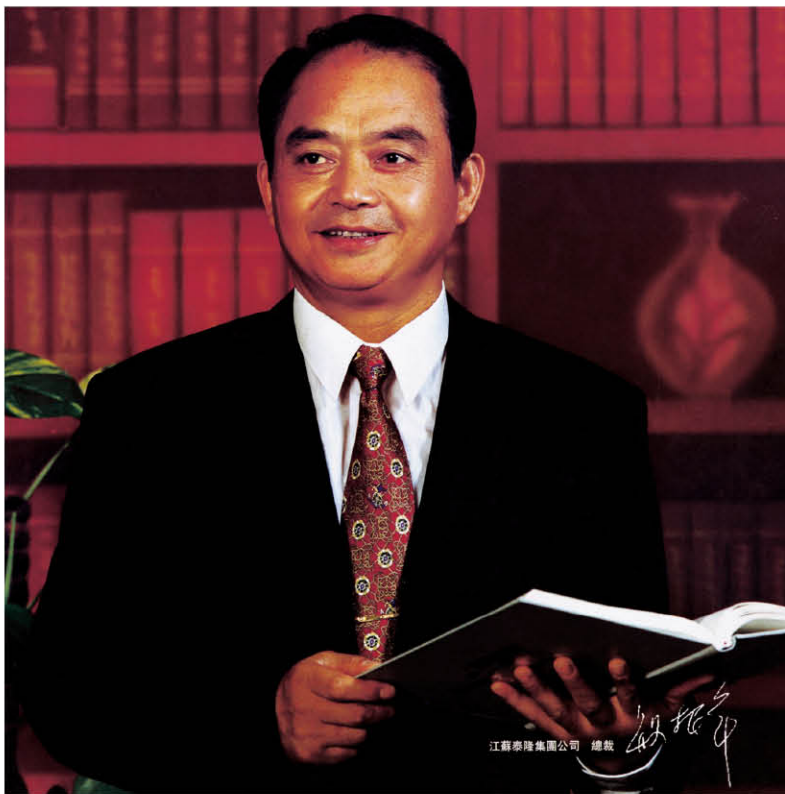
TLK系列起重机 加长中心距齿轮箱



TAILONG MACHINERY

江苏泰隆机械集团公司
JIANGSU TAILONG MACHINERY GROUP COMPANY

江苏泰隆减速机股份有限公司
JIANGSU TAILONG DECELERATOR MACHINERY CO.,LTD.



公司简介

泰隆集团地处扬子江畔的泰兴市区，是泰兴人引以为豪的国家大型企业。泰隆集团东临沪宁高速，西靠南京禄口机场，南有江阴大桥，交通便捷，物流畅通，具有得天独厚的区位优势。

集团在全国优秀企业家、江苏省劳动模范董事长殷根章的领导下，经过20多年的悉心经营，昂首迈进了中国机械工业500强，成为全国减变行业排头兵企业。集团现拥有总资产12.06亿元，固定资产6.92亿元，占地面积80万平方米，员工3162人，专业工程技术人员991人。拥有美国、德国、日本、俄罗斯、奥地利等国家引进的大型数控磨齿机、大型数控镗铣床、蜗杆磨床、加工中心、碳氮共渗炉等一批高精尖的生产设备和检测设备达48%。建立了全国同行业中检测功能最全、仪器最先进的2000kW测试中心，创建了江苏省技术中心、江苏省传动机械与控制工程技术研究中心、泰隆集团—哈工大工程技术研究中心、博士后科研工作站。公司的主导产品减速机在原有十几个系列，几十万种规格的基础上，采用先进的模块化、点线啮合等技术开发出了TL模块化齿轮减速机、TXP行星模块化减速器、重载模块化齿轮减速器、点线啮合减速器、立式磨机及边缘传动磨机齿轮箱、铝冶行业的联合开卷卷取齿轮箱、三环减速器、星轮减速器、风电齿轮箱、水力发电变速装置、核电循环水泵驱动变速装置等高新技术产品，以及各类特殊非标齿轮箱。泰隆工业园区已经成为国内最大的钢帘线设备生产基地，双叶、三叶罗茨风机及高温风机批量出口东南亚及欧美。

我们的产品成功应用于中华世纪坛、三峡大坝、嫦娥一号发射、杭州湾跨海大桥、北京奥体馆、上海世博会等国家重点工程。重点客户有宝钢集团、首钢集团、上海振华港机、燕山石化、葛州坝集团、北京水工、中国铝业、伊拉克泵站、桂林橡塑、乐山成发、三一重工等。

公司现为全国减速机标准化技术委员会秘书处单位，荣获“全国首批守合同重信用企业”，“国家重点高新技术企业”，“全国机械工业质量效益型先进企业”，“全国机械工业质量管理奖”，“全国用户满意服务”，“全国机械工业质量管理小组活动优秀企业”等殊荣。在同行业中率先通过了国家AAAA标准化良好行为企业认证、一级安全质量标准化机械制造企业认证、GB/T19022-2003完善计量检测体系认证、ISO9001-2008质量体系认证、ISO14001-2004环境体系认证、OHSAS18001-1999职业健康安全认证。

产品通过矿用产品安全标志认证、起重行业型式试验认可认证，泰隆牌商标被国家工商总局认定为中国驰名商标，泰隆牌减速机被评为中国名牌产品。泰隆人将遵循自己一贯的质量承诺、服务承诺和信誉承诺，把顾客满意当作我们的最高追求！

Company Brief

Tailong Group, located in Taixing city along riverside of the Yangzi River, is a national giant enterprise which Taixing people are proud of. Tailong Group is east to Highway of Shanghai-Nanjing, west to Nanjing Lukou airport and south to the Jiangyin Bridge. Convenient transportation and smooth physical distribution build the unparalleled location advantages for Tailong Group.

With effortful operation for over 20 years, Tailong Group, under leadership of national outstanding entrepreneur, chairman Mr. Yin genzhang, a model worker of Jiangsu Province, has developed in one of top 500 machinery industrial enterprises in China, playing a leading role in domestic reducer/transmission industry.

At present, the group has total assets of RMB1206million, and fixed assets of RMB 692 million, and it covers an area of 800,000 square meters and more than 3000 employees, where professional technicians account for 991. 48% of our equipments are sophisticated and advanced manufacturing equipments and testing equipments such as large CNS gear grinding machine, large CNC boring and milling machine, worm grinder, machining centre, and carbonitriding furnace that are imported from USA, Germany, Japan, Russia, Australia and so on. Diameter of machining work piece reaches 5m to the maximum. Single reducer we produced reaches 120 tons to the maximum. We have established a 2000kW testing center with most complete testing function and most advanced instruments of the industry national wide, and established a provincial engineering technical center, mechanical transmission and control Engineering Research Center of Jiangsu Province, Tailong Group - Harbin Technology Engineering Research Center and a post-doctoral research station. The dominant product, the reducer is available in decades of series and several hundred thousand specifications. Equipped with advanced modular and dot line engagement technology, we have additionally developed series of high tech products such as TL modular gear retarded machine, TXP modular planet reducer, heavy load modular gear retarded machine, dot line engaged reducer, vertical grinder and edge drive grinder gearbox, joint, open-book, take-up gearbox used for aluminum metallurgy industry, three ring gear reducer, planetary wheel speed reducer, wind driven gearbox, transmission for hydro-power generation, nuclear circling pump driven gearbox, and various special non-standard gearboxes. Tailong Industrial Park has become the largest steel cord production base of national wide. Our two-vane and three-vane Roots blowers and high temperature blower are exported to South East Asia, Europe and America in batches.

Our products are successfully used in the China Millennium Monument, the Three Gorges Dam, the Chang'e launch, Hangzhou Bay Bridge, Beijing Olympic Gymnasium, the Shanghai World Expo and other national key projects. Key customers include Baosteel Group, Shougang Group, Shanghai Zhenhua Port Machinery, Yanshan Petrochemical, Gezhouba Group, Beijing hydraulic, China aluminium, Iraqi pump station, Guilin Rubber, Leshan Chengfa, Sany Heavy Industry and so on.

The company is now a secretariat unit for national technical committee for standardization of reducer. We are ever granted as "national first contract respecting and credit-keeping enterprise", "national key high-tech enterprise", "national high quality and efficiency unit in machinery industry", "quality management award of national machinery industry", "national custom satisfied service", "excellent enterprise of quality management team activity of national machinery industry" and so on. We are certified as the good enterprise with better standardization with national AAAA certification and the first grade safety quality standardized machinery manufacturing enterprise and have passed such certifications as GB/T 19022-2003 perfect measurement test system, ISO 9001-2008 quality system, ISO 14001-2004 environment system, and OHSAS 18001-1999 occupational health and safety. Our products are certified with safety marks for mining products and recognized pass lifting industry type test. Tailong brand is recognized as the Chinese famous brand by national industrial and commercial bureau and Tailong reducer is awarded as the Chinese famous brand product.

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

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1 简介:

本公司齿轮箱产品在起重设备中广泛应用于门式起重机、塔式起重机、浮式起重机、缆索起重机、装卸桥、桥式起重机等各种起重机设备的主、副起升以及回转、行走、变幅机构中，在港口、矿山、冶金、建筑造船等行业以优质的服务和稳定的产品质量得到了客户的一致好评。

TLK系列是根据起重设备的结构和传动特点专门设计的一款齿轮箱，在同样的承载能力下加大了输出、输入轴之间的中心距，避免了为满足安装尺寸而不得不浪费功率的情况，特别适合用于门式起重机、桥式起重机、集装箱起重机的主、副起升机构中。

由于采用了模块化设计，减少了零部件的库存，也使交货周期更加缩短。

TLK系列中可以选择3级或者4级传动，其速比范围可达14~250。

TLK系列的齿轮箱箱体是采用HT250铸造材质，也可以采用钢板焊接而成：TLK系列的齿轮箱（机座号15-22）完全采用钢板焊接齿轮箱箱体。

2型号标记方法:

1 Overview:

With professional service and stable quality, TAILONG gear units have been well received with praise around china and world. In crane industry, our products are widely used in main or auxillary hoisting gears of gantry crane, tower crane, truck crane, tyre crane, crawler crane, deck crane, floating crane, cable crane, transporter crane, overhead crane etc., which have made great achievements in different industries such as harbor, mine, metallurgy, construction, shipbuilding, etc.

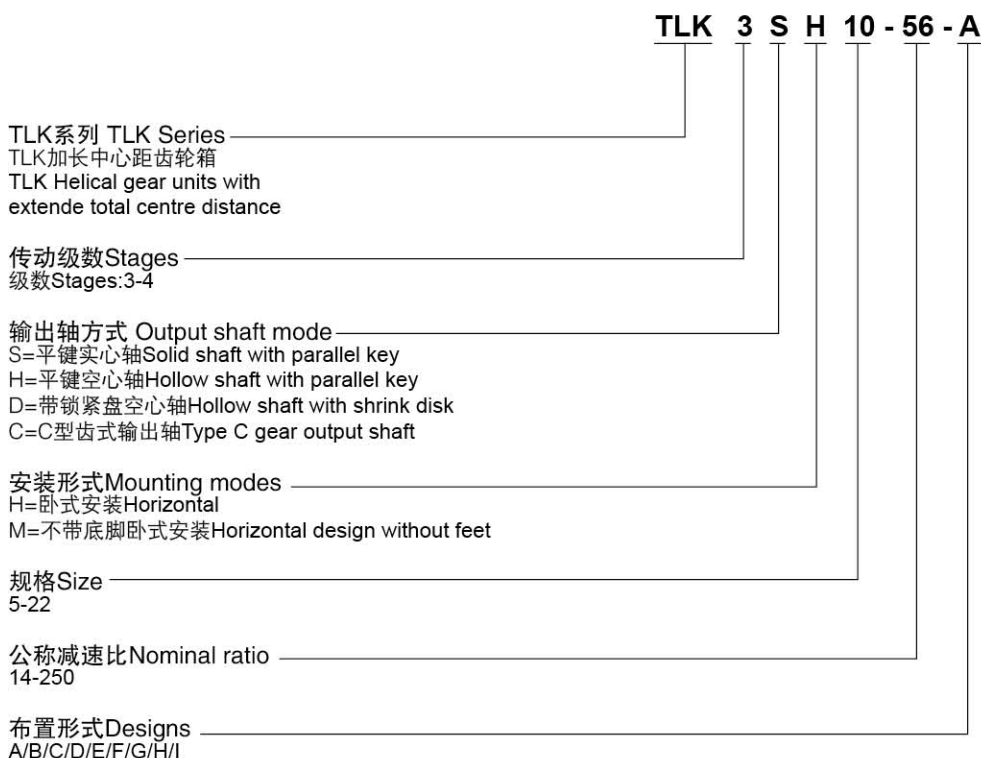
TLK series gear units are specially designed for crane in terms of its structure and characteristics, with the same transmission capacity, we extended center distance between output shaft and input shaft so as to reduce power loss when have to meet requirements of mounting size. TL series products are in particular fit for main or auxiliary hoisting gears of gantry crane, overhead crane and container crane.

Adopting modular design, which reduce parts stock and motivate fast delivery.

For TLK series gear units, 3-stage or 4-stage transmission can be selected and ratio range is 14-250

The housing of TLK series gear units are using HT250 casting material or welding steel plate, TLK series gear units (size 15-22) completely adopt steel plate welding for housing

2 Type designation:



3 选用方法Type selection and example:

序号 Steps	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	f1	查f1表 Refer to f1 table	
2	原动机系数 Prime mover factor	f2	原动机系数 Prime mover factor	f2
			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 Piston 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 Piston engine with 1-3 cylinders,cyclic variation 1:100	1.5
3	齿轮箱可靠度系数 Factor for gear unit reliability	SF	查SF表 Refer to SF table	
4	输入转速 Input speed	n1	≤1500r/min 更高转速请来电咨询 Consult us if higher speed required	
5	确定减速比 Calculation of the ratio	i	$i=n1/n2$	
6	齿轮箱传动效率 Transmission efficiency	η	三级3-stage:94%,四级4-stage:92%	
7	以被驱动设备所需的扭矩或功率, 确认齿轮箱输入功率 Calculate the input power of the gear unit on basis of the torque and power required by the driven machine	P1	$P1=T_2 \cdot n_1 / (9550 \cdot i \cdot \eta)$	
8	根据计算, 查传动能力表, 确定齿轮箱机座号 Determination of gear unit type referring to the table of transmission capacity.	T2N、p1N	$T_{2N} \geq T_2 \cdot f_1 \cdot f_2 \cdot S_F$ 或 $P_{1N} \geq P_1 \cdot f_1 \cdot f_2 \cdot S_F$	
9	峰值扭矩校核* Check peak torque	TA	$P_{1N} \geq T_A \cdot n_1 \cdot f_3 / 9550$	
10	选定连接安装和附件后、校核轴许用强度 Check permissible strength of the shaft after output mode and accessories are selected	Fr1/Fr2 Fa1/Fa2	当输入、输出轴为皮带轮、链轮或齿轮等明显有附加径向力传动时必须校核径向力。 It is crucial to check radial forces on the shafts when input and output shafts are for pulleys or gears.	
11	确认润滑方式 选择润滑油 Determination of lubrication systems and lubricants		可供选择的润滑方式Optional lubrications: a).飞溅润滑 Splash b).强制润滑 Forced	
12	按型号表示方法确定各项 Determination of every item included in the type designation		型号表示方法见第3页 For details about type designation, see page 3	

* 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。(一般工矿条件下峰值扭矩为启动或制动时的最大扭矩)

*Peak torque: max. load torque, e.g. peak starting, braking and operating torque. (Generally, it refers to peak starting or braking torque.)

选型举例 Examples

选型示例

原动机:

电机功率: $P_m=185\text{kW}$

电机转速: $n_1=710\text{rpm}$

最大启动扭矩: $T_A=3980\text{N.m}$

工作机:

桥式起重机主起升

提升功率: $P_1=175\text{kW}$

卷筒转速: $n_2=14\text{rpm}$

工作级别: Q3-U9-A8

工作时间: $>50000\text{小时}$

环境温度: $0\sim40^\circ\text{C}$

齿轮箱:

平行轴齿轮箱

轴布置形式: G

中心距: $\geq 1200\text{mm}$

选型步骤:

1. 计算速比: $i=n_1/n_2=710/14=50.7$

取 $i_N=50$

2. 确定齿轮箱的额定功率:

$$P_{1N} \geq P_1 \cdot f_1 \cdot f_2 \cdot S_F$$

$$=175 \times 1.6 \times 1 \times 1.2 = 336\text{kW}$$

根据传动能力表查得: 齿轮箱机座号为18

3. 峰值扭矩校核:

$$P_{1N} \geq T_A \cdot n_1 / 9550 \cdot f_3$$

$$=3980 \times 710 / 9550 \times 0.9 = 266.3\text{kW}$$

$P_{1N}=373 > 266.3$ 满足要求

确定型号:

TLK3SH18-50-G

Selection example

Prime mover:

Motor power: $P_m=185\text{kW}$

Speed: $n_1=710\text{rpm}$

Max starting torque: $T_A=3980\text{N.m}$

Driven machine:

Main hoisting gears of overhead crane

Hoisting power: $P_1=175\text{kW}$

Drum speed: $n_2=14\text{rpm}$

Working level: Q3-U9-A8

Working hour: $>50000\text{ hours}$

Ambient temperature: $0\sim40^\circ\text{C}$

Gear units:

Parallel shaft gear units

Shaft arrangement: G

Center distance: $\geq 1200\text{mm}$

Selection steps:

1. Calculation of ratio: $i=n_1/n_2=710/14=50.7$

take $i_N=50$

2. Determination of nominal power of gear unit:

$$P_{1N} \geq P_1 \cdot f_1 \cdot f_2 \cdot S_F$$

$$=175 \times 1.6 \times 1 \times 1.2 = 336\text{kW}$$

Referring to transmission capacity:

Gear unit size is 18

3. Verify peak torque:

$$P_{1N} \geq T_A \cdot n_1 / 9550 \cdot f_3$$

$$=3980 \times 710 / 9550 \times 0.9 = 266.3\text{kW}$$

$P_{1N}=373 > 266.3$ meet requirement

Determination of type designation:

TLK3SH18-50-G

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4 机构工作级别及服务系数 Working level and service factors:

起重机形式 Cranes		工作级别 Working level	起重机形式 Cranes		工作级别 Working level		
门式起重机 Gantry crane	安装用吊钩式 Fitting hook type	A3-A5	桥式起重机 Overhead gears	吊钩式 Hook type	电厂安装及检修用 For power plant installment and overhaul	A1-A3	
	装卸用吊钩式 Loading and unloading hook type	A6-A7			车间及仓库用 For workshop and warehouse	A3-A5	
	装卸用抓斗式 Loading and unloading grab type	A7-A8			繁重车间及仓库用 For arduous workshop and warehouse	A6-A7	
塔式起重机 Tower crane	一般建筑安装用 For normal construction fitting	A2-A4		抓斗式 Grab type	间断装卸用 For intermittent loading and unloading	A6-A7	
	用吊罐装卸混凝土 Loading and unloading concrete with bucket	A4-A6			连续装卸用 For continuous loading and unloading	A8	
汽车、轮胎、履带起重机 Truck\tyre\crawler crane	安装及装卸用吊钩式 Fitting loading and unloading hook type	A1-A4		冶金专用 Metallurgy special type	吊料箱用 For lifting material box	A7-A8	
	装卸用抓斗式 Loading and unloading grab type	A4-A6			加料用 For feeding material	A8	
甲板起重机 Deck crane	吊钩式 Hook type	A4-A6			铸造用 For foundry	A6-A8	
	抓斗式 Grab type	A6-A7			锻造用 For forging	A7-A8	
浮式起重机 Floating crane	装卸用吊钩式 Loading and unloading hook type	A5-A6			淬火用 For quenching	A8	
	装卸用抓斗式 Loading and unloading grab type	A6-A7			夹钳、脱锭用 For clamping and ingot drawing	A8	
	造船安装用 Shipbuiding installment type	A4-A6			揭盖用 For uncovering	A7-A8	
缆索起重机 Cable crane	安装用吊钩式 Fitting hook type	A3-A5				料耙式 Raking type	A8
	装卸或施工用吊钩式 Loading,unloading or construction hook type	A6-A7				电磁铁式 Electric magnet type	A7-A8
	装卸或施工用抓斗式 Loading,unloading or construction grab type	A7-A8					
装卸桥 Transporter crane	料场装卸用抓斗式 Loading and unloading grab for stockgard	A7-A8	门式起重机 Portal crane	一般用途吊钩式 Normal using hook type		A5-A6	
	港口装卸用抓斗式 Loading and unloading grab for habor	A8		装卸用抓斗式 Loading and unloading grab type		A7-A8	
	港口装卸集装箱用 Loading and unloading container for harbor	A6-A8		电厂用吊钩式 Hook for power plant		A2-A3	
		造船安装用吊钩式 Shipbuilding installment hook type		A4-A5			
-	-	-		装卸集装箱用 Loading and unloading container type		A6-A8	

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表5 Table 5	齿轮箱可靠度系数 Safety factor	S_F
一般设备, 减速机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 gear units fail,easy to replace spare parts and minor loss occurred		$1.0 \leq S_F \leq 1.3$
重要设备, 减速机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 gear units fail,heavy loss.		$1.3 < S_F \leq 1.5$
高可靠度要求, 减速机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 gear units fail,enormous loss and life injuries.		$1.5 < S_F$

载荷分级 Load	说明 Specification	服务 系数 Service factor	工作机系数f1 Driven machine factor						峰值扭矩系数f3 Peak torque factor			
			工作时间（小时）Working hours									
			U0		U1		U2		U3		U4	
			≤200		> 200~400		> 400~800		> 800~1600		> 1600~3200	
Q1 轻 Light	很少起升额定载荷，一般起升较轻载荷 Rarely hoisting nominal load,normally hoisting light load	1)f1	0.8	A1	0.8	A1	0.8	A1	0.8	A2	0.8	A3
		2)f3	0.8		0.8		0.8		0.8			
		3)f3	0.8		0.8		0.8		0.8			
Q2 中 Medium	有时起升额定载荷，一般起升中等载荷 Sometimes hoisting nominal load, normally hoisting medium load	1)f1	0.8	A1	0.8	A1	0.8	A2	0.9	A3	0.9	A4
		2)f3	0.5		0.5		0.5		0.5			
		3)f3	0.8		0.8		0.8		0.8			
Q3 重 Heary	经常起升额定载荷，一般起升较重载荷 Often hoisting nominal load,normally hoisting heavy load	1)f1	0.8	A1	0.8	A2	0.9	A3	1	A4	1	A5
		2)f3	0.5		0.5		0.5		0.5			
		3)f3	0.8		0.8		0.8		0.8			
Q4 特重 Super heavy	频繁的起升额定载荷 Frequently hoisting nominal load	1)f1	0.9	A2	0.9	A3	1	A4	1.1	A5	1.2	A6
		2)f3	0.5		0.5		0.5		0.5			
		3)f3	0.8		0.8		0.8		0.8			

载荷分级 Load	说明 Specification	服务 系数 Service factor	工作机系数f1 Driven machine factor						峰值扭矩系数f3 Peak torque factor			
			工作时间（小时）Working hours									
			U5		U6		U7		U8		U9	
			> 3200~6300		> 6300~12500		> 12500~50000		> 25000~50000		> 50000	
Q1 轻 Light	很少起升额定载荷，一般起升较轻载荷 Rarely hoisting nominal load,normally hoisting light load	1)f1	0.9	A4	1	A5	1	A6	1.1	A7	1.2	A8
	2)f3	0.5	0.56		0.63		0.71		0.8			
	3)f3	0.8	0.8		1.9		1		1.12			
Q2 中 Medium	有时起升额定载荷，一般起升中等载荷 Sometimes hoisting nominal load, normally hoisting medium load	1)f1	1	A5	1.1	A6	1.2	A7	1.3	A8	1.4	A8
	2)f3	0.5	0.56		0.63		0.71		0.8			
	3)f3	0.8	0.8		0.9		1		1.12			
Q3 重 Heary	经常起升额定载荷，一般起升较重载荷 Often hoisting nominal load,normally hoisting heavy load	1)f1	1.1	A6	1.2	A7	1.3	A8	1.4	A8	1.6	A8
	2)f3	0.56	0.63		0.71		0.8		0.9			
	3)f3	0.8	0.9		1		1.12		1.25			
Q4 特重 Super heavy	频繁的起升额定载荷 Frequently hoisting nominal load	1)f1	1.3	A7	1.4	A8	1.6	A8	1.8	A8	2	A8
	2)f3	0.56	0.63		0.71		0.8		0.9			
	3)f3	0.8	0.9		1		1.12		1.25			

1)f1=工作机系数 Driven machine factor

2)f3=在负载方向保持不变时的峰值扭矩系数, 如起升, 变幅机构等。

Peak torque factor when load direction is unchanging,such as hoisting gears,luffing gear,etc.

3)f3=在负载方向交替改变时的峰值扭矩系数, 如回转, 行走机构等。

Peak torque factor when load direction is alternating,such as slewing gears,travelling gears,etc.

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5 承载能力表 Transmission capacity:

n_1 (r/min)	i_N	TLK3..5		TLK3..6		TLK3..7		TLK3..8		TLK3..9		TLK3..10	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	14		125				235				381		
1000		11.6	83			21.7	156			35.7	254		
750			62				117				191		
1500	16		110				202				330		
1000		11.6	73			21.7	135			35.7	220		
750			54				101				165		
1500	18		100		135		183		233		298		373
1000		11.6	66	15.5	90	21.7	122	27.2	155	35.7	198	43.8	248
750			49		67		92		116		149		187
1500	20		91		118		164		202		269		323
1000		11.6	60	15.5	79	21.7	110	27.2	134	35.7	179	43.8	215
750			45		59		82		100		134		162
1500	22.4		78		107		148		182		241		292
1000		11.6	53	15.5	72	21.7	99	27.2	122	35.7	160	43.8	194
750			39		54		74		91		120		146
1500	25		71		98		134		163		214		262
1000		11.6	48	15.5	65	21.7	89	27.2	109	35.7	142	43.8	175
750			36		49		67		82		108		131
1500	28		64		85		115		147		190		236
1000		11.6	42	15.5	57	21.7	76	27.2	98	35.7	127	43.8	157
750			32		42		57		74		95		118
1500	315		57		77		102		133		168		210
1000		11.6	38	15.5	51	21.7	68	27.2	88	35.7	112	43.8	139
750			28		38		51		66		84		104
1500	35.5		51		69		91		114		150		186
1000		11.6	33	15.5	46	21.7	60	27.2	76	35.7	100	43.8	124
750			25		35		45		57		75		93
1500	40		45		62		81		101		131		165
1000		11.6	30	15.5	41	21.7	54	27.2	67	35.7	87	43.8	110
750			22		30		40		51		65		82
1500	45		40		55		72		91		124		147
1000		11.6	27	15.5	36	21.7	48	27.2	60	35.7	82	43.8	98
750			20		27		36		45		62		73
1500	50		36		48		68		81		110		128
1000		11.6	24	15.5	32	21.7	46	27.2	54	35.7	73	43.8	85
750			18		24		34		40		55		64
1500	56				43				72				121
1000				15.5	29			27.2	48			43.8	81
750					22				36				60
1500	63				38				67				106
1000				15.5	26			27.2	45			43.8	71
750					19				34				54

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n_1 (r/min)	i_N	TLK3..11		TLK3..12		TLK3..13		TLK3..14		TLK3..15		TLK3..16	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	14	63.5	688			88	923						
1000			457				615						
750			343				461						
1500	16	63.5	622			88	834						
1000			414				556						
750			311				417						
1500	18	63.5	561	77.2	657	88	751	109	923	153	1339		
1000			374		438		500		615		892		
750			281		328		375		462		669		
1500	20	63.5	479	77.2	594	88	673	109	833	153	1210	173	1319
1000			316		396		449		555		805		879
750			240		298		337		417		605		660
1500	22.4	63.5	427	77.2	537	88	601	109	750	153	1089	173	1191
1000			285		358		400		499		725		793
750			213		268		300		375		544		595
1500	25	63.5	394	77.2	457	88	548	109	672	153	976	173	1072
1000			262		305		365		448		650		714
750			197		229		273		334		438		536
1500	28	63.5	352	77.2	408	88	468	109	600	153	871	173	961
1000			235		272		312		399		580		640
750			176		205		234		300		435		480
1500	315	63.5	313	77.2	377	88	418	109	547	153	794	173	858
1000			209		250		279		364		529		571
750			156		189		209		274		397		429
1500	35.5	63.5	276	77.2	337	88	371	109	471	153	678	173	783
1000			184		224		247		311		451		521
750			138		169		186		235		339		392
1500	40	63.5	251	77.2	300	88	342	109	418	153	606	173	668
1000			167		200		228		278		403		445
750			126		150		171		209		303		334
1500	45	63.5	225	77.2	264	88	303	109	370	153	538	173	597
1000			150		176		202		247		358		397
750			113		132		152		185		269		299
1500	50	63.5	199	77.2	240	88	264	109	342	153	497	173	529
1000			133		160		176		228		331		352
750			100		120		132		171		248		265
1500	56			77.2	215			109	303	153	440	173	489
1000					143				202		293		325
750					108				151		220		245
1500	63			77.2	191			109	264			174	435
1000					127				176				290
750					95				132				217

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n_1 (r/min)	i_N	TLK3..17		TLK3..18		TLK3..19		TLK3..20		TLK3..21		TLK3..22	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	14												
1000													
750													
1500	16												
1000													
750													
1500	18	200	1818			300	2760			420	3564		
1000			1212				1840				2376		
750			909				1380				1782		
1500	20	200	1647	240	1879	300	2384	345	2782	420	3218	470	3568
1000			1098		1252		1589		1855		2145		2379
750			824		939		1192		1391		1609		1784
1500	22.4	200	1487	240	1702	300	2155	345	2403	420	2896	470	3222
1000			991		1134		1436		1602		1931		2148
750			743		851		1077		1201		1448		1611
1500	25	200	1339	240	1536	300	1940	345	2171	420	2596	470	2899
1000			893		1024		1293		1447		1731		1933
750			669		768		970		1085		1298		1449
1500	28	200	1199	240	1383	300	1739	345	1955	420	2334	470	2599
1000			799		922		1159		1303		1556		1733
750			600		691		869		977		1167		1299
1500	315	200	1069	240	1240	300	1551	345	1754	420	2099	470	2337
1000			713		826		1034		1169		1399		1558
750			534		620		775		877		1049		1168
1500	35.5	200	966	240	1104	300	1365	345	1563	420	1877	470	2101
1000			644		736		910		1042		1251		1399
750			483		552		682		781		938		1050
1500	40	200	855	240	998	300	1221	345	1377	420	1666	470	1879
1000			570		665		814		918		1110		1252
750			427		499		610		688		833		939
1500	45	200	762	240	884	300	1082	345	1230	420	1467	470	1668
1000			508		589		722		820		978		1112
750			381		442		541		615		733		834
1500	50	200	673	240	787	300	949	345	1091	420	1264	470	1469
1000			449		524		633		727		843		979
750			336		393		474		545		632		734
1500	56	200	578	240	695	300	894	345	956	420	1135	470	1266
1000			385		463		596		637		757		844
750			289		347		447		478		567		633
1500	63			240	600			346	905			471	1139
1000					400				603				760
750					300				452				

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n_1 (r/min)	i_N	TLK4..5		TLK4..6		TLK4..7		TLK4..8		TLK4..9		TLK4..10	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	22.4	11.6	78			21.7	145			35.7	240		
1000			52				96				160		
750			39				72				120		
1500	25	11.6	68			21.7	133			35.7	209		
1000			45				89				139		
750			34				66				104		
1500	28	11.6	63	15.5	85	21.7	117	27.2	144	35.7	191	43.8	235
1000			42		56		78		96		127		156
750			31		42		58		72		95		117
1500	31.5	11.6	55	15.5	74	21.7	101	27.2	132	35.7	180	43.8	205
1000			36		49		67		88		120		136
750			27		37		55		66		90		102
1500	35.5	11.6	49	15.5	67	21.7	93	27.2	117	35.7	164	43.8	187
1000			33		45		62		78		109		125
750			24		34		46		58		82		93
1500	40	11.6	43	15.5	59	21.7	80	27.2	100	35.7	150	43.8	177
1000			29		39		54		66		100		117
750			21		29		40		50		75		86
1500	45	11.6	39	15.5	54	21.7	73	27.2	92	35.7	130	43.8	161
1000			26		35		49		61		87		107
750			20		27		36		46		65		80
1500	50	11.6	35	15.5	46	21.7	63	27.2	80	35.7	105	43.8	147
1000			23		31		42		54		70		98
750			17		23		31		40		53		73
1500	56	11.6	31	15.5	42	21.7	58	27.2	73	35.7	92	43.8	127
1000			21		28		38		49		61		85
750			15		21		29		36		46		63
1500	63	11.6	29	15.5	38	21.7	52	27.2	63	35.7	85	43.8	103
1000			18		25		34		42		56		69
750			14		18		26		31		42		51
1500	71	11.6	26	15.5	34	21.7	46	27.2	58	35.7	76	43.8	90
1000			17		23		31		38		51		60
750			12		16		23		29		38		45
1500	80	11.6	23	15.5	31	21.7	41	27.2	50	35.7	68	43.8	83
1000			15		21		27		34		46		55
750			11		15		20		25		34		41
1500	90	11.6	19	15.5	28	21.7	36	27.2	46	35.7	59	43.8	75
1000			13		18		24		31		39		50
750			10		13		18		23		29		37
1500	100	11.6	17	15.5	25	21.7	33	27.2	41	35.7	54	43.8	67
1000			12		16		22		27		36		45
750			9		12		17		20		27		33
1500	112	11.6	16	15.5	22	21.7	28	27.2	36	35.7	47	43.8	58
1000			10		14		19		24		32		38
750			8		11		14		18		23		29
1500	125	11.6	14	15.5	19	21.7	26	27.2	33	35.7	42	43.8	52
1000			9		13		17		22		28		34
750			7		9		13		16		21		26
1500	140	11.6	12	15.5	17	21.7	23	27.2	28	35.7	38	43.8	46
1000			8		11		15		19		25		31
750			6		8		11		14		19		23
1500	160	11.6	11	15.5	15	21.7	19	27.2	26	35.7	34	43.8	42
1000			7		10		13		17		23		28
750			5		7		10		13		17		21
1500	180	11.6	10	15.5	13	21.7	18	27.2	23	35.7	30	43.8	37
1000			6		9		12		15		20		25
750			5		7		9		11		15		18
1500	200	11.6	9	15.5	12	21.7	16	27.2	19	35.7	27	43.8	33
1000			6		8		10		13		18		22
750			4		6		8		9		13		16
1500				15.5	11			27.2	18			43.8	30
1000					7				12				20
750					5				9				15
1500				15.5	10			27.2	15			43.8	26
1000					6				10				17
750					5				8				12

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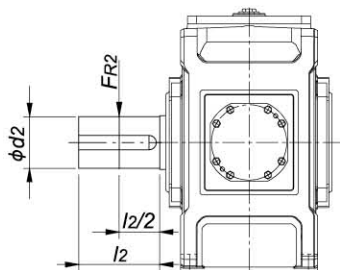
n_1 (r/min)	i_N	TLK4..11		TLK4..12		TLK4..13		TLK4..14		TLK4..15		TLK4..16	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	22.4	63.5	433			88	582						
1000			289				388						
750			216				291						
1500	25	63.5	374			88	502			153	946		
1000			249				335				631		
750			187				251				473		
1500	28	63.5	338	77.2	413	88	454	109	581	153	819	173	943
1000			225		276		302		387		546		628
750			169		206		274		290		409		471
1500	31.5	63.5	306	77.2	358	88	409	109	502	153	741	173	816
1000			204		238		273		335		494		544
750			153		179		205		251		370		408
1500	35.5	63.5	275	77.2	322	88	369	109	454	153	669	173	738
1000			183		215		246		302		446		492
750			137		161		184		227		334		369
1500	40	63.5	247	77.2	292	88	331	109	409	153	570	173	667
1000			165		195		220		273		380		444
750			123		146		165		205		285		333
1500	45	63.5	224	77.2	264	88	295	109	369	153	509	173	568
1000			149		176		196		246		339		378
750			112		132		147		184		254		284
1500	50	63.5	197	77.2	236	88	264	109	331	153	482	173	508
1000			131		157		176		220		321		338
750			94		118		132		165		241		254
1500	56	63.5	176	77.2	214	88	227	109	295	153	435	173	480
1000			114		143		152		196		290		320
750			88		107		114		147		218		240
1500	63	63.5	151	77.2	188	88	206	109	262	153	393	173	434
1000			103		125		137		175		262		289
750			75		94		103		131		196		217
1500	71	63.5	138	77.2	163	88	185	109	227	153	335	173	342
1000			92		109		123		151		223		261
750			69		82		92		114		167		196
1500	80	63.5	122	77.2	147	88	164	109	206	153	303	173	334
1000			81		98		109		137		202		222
750			61		74		82		103		151		167
1500	90	63.5	109	77.2	132	88	146	109	185	153	271	173	302
1000			73		88		98		123		180		201
750			55		66		73		92		135		151
1500	100	63.5	99	77.2	117	88	131	109	164	153	249	173	270
1000			66		78		87		109		166		180
750			49		58		66		82		124		135
1500	112	63.5	90	77.2	104	88	116	109	147	153	223	173	249
1000			60		69		77		98		149		166
750			45		52		58		73		112		125
1500	125	63.5	75	77.2	95	88	103	109	131	153	198	173	222
1000			50		63		69		87		132		148
750			38		47		51		66		99		111
1500	140	63.5	67	77.2	86	88	92	109	116	153	175	173	197
1000			45		57		61		77		116		131
750			34		43		46		58		87		99
1500	160	63.5	60	77.2	72	88	80	109	103			173	174
1000			40		48		54		69				116
750			30		36		40		52				87
1500	180	63.5	54	77.2	64	88	75	109	91				
1000			36		43		50		61				
750			27		32		38		46				
1500	200	63.5	51	77.2	58	88	67	109	80				
1000			34		39		45		54				
750			25		29		34		40				
1500	224			77.2	52			109	75				
1000					34				50				
750					26				38				
1500	250			77.2	48			109	67				
1000					32				45				
750					24				34				

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n_1 (r/min)	i_N	TLK4..17		TLK4..18		TLK4..19		TLK4..20		TLK4..21		TLK4..22	
		T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)	T_{2N} (kN · m)	P_{1N} (kW)
1500	22.4												
1000													
750													
1500	25	200	1338			300	1972			420	2516		
1000			892				1314				1677		
750			669				966				1258		
1500	28	200	1153	240	1382	300	1697	345	1987	420	2178	470	2519
1000			768				1132				1452		1679
750			576				848				1089		1259
1500	31.5	200	1040	240	1191	300	1533	345	1712	420	1973	470	2181
1000			693				1022				1315		1454
750			520				767				986		1090
1500	35.5	200	937	240	1075	300	1380	345	1546	420	1782	470	1976
1000			624				920				1188		1317
750			468				690				891		988
1500	40	200	889	240	968	300	1238	345	1391	420	1604	470	1785
1000			560				825				1069		1190
750			420				619				802		892
1500	45	200	749	240	867	300	1104	345	1247	420	1437	470	1606
1000			500				736				958		1070
750			374				552				718		803
1500	50	200	694	240	774	300	1007	345	1112	420	1281	470	1439
1000			463				671				854		959
750			347				503				640		719
1500	56	200	590	240	706	300	869	345	1015	420	1167	470	1282
1000			393				580				778		855
750			295				435				584		641
1500	63	200	529	240	610	300	779	345	877	420	1050	470	1168
1000			353				520				700		779
750			265				390				525		584
1500	71	200	472	240	547	300	696	345	786	420	922	470	1051
1000			315				464				615		701
750			236				348				461		526
1500	80	200	416	240	488	300	612	345	701	420	833	470	923
1000			277				408				555		615
750			208				306				417		462
1500	90	200	371	240	429	300	547	345	617	420	749	470	834
1000			247				365				500		556
750			185				273				375		417
1500	100	200	338	240	383	300	498	345	551	420	672	470	751
1000			225				332				448		500
750			169				249				336		375
1500	112	200	289	240	349	300	426	345	502	420	599	470	673
1000			193				284				399		449
750			145				213				299		336
1500	125	200	258	240	299	300	380	345	429	420	541	470	600
1000			172				254				360		400
750			129				190				270		300
1500	140	200	228	240	267	300	337	345	383	420	479	470	542
1000			152				225				319		361
750			114				168				239		271
1500	160			240	237			345	340	421	428	470	480
1000											285		320
750											214		240
1500	180											470	428
1000													285
750													214
1500	200												
1000													
750													
1500	224												
1000													
750													
1500	250												
1000													
750													

6 输出轴允许的附加径向力Permissible additional radial forces on output shaft:

6.1输出轴d2上允许的附加径向力Permissible additional radial forces on output shaft d2:



允许的附加径向力Fr2(kN),作用于输出轴端中部 *
Permissible additional radial forces Fr2(kN)acting on the center of the output shaft*

型号 Type	布置形式 Design	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
TLK3SH	A+B+G+H	18	18	26	26	18	40	50	50	150	150	120	185	185	190	284	305	308	330
	C+D	29	29	40	40	40	60	85	85	190	190	185	265	265	265	365	372	395	400
TLK4SH	A+B+G+H	18	18	26	26	18	40	50	50	150	150	120	185	185	190	284	305	308	330
	C+D			40	40	40	60	85	85	190	190	185	265	265	265	365	372	395	400

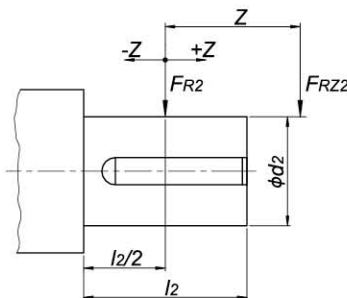
注: 1)如果给定了力的作用角和回转方向, 通常情况下, 可允许承受较大的附加力。请与我司联系。
2)*当作用力不在轴端中部时, 请参见6.2。
3)基础螺栓的最低性能等级为8.8级。基础必须干燥, 不得有油脂。如用户要求, 允许输入轴d1上附加径向力, 具体请与我司联系。

Note:1)If angle of action and turning direction of the force are known,in most cases,higher radial force can be allowed.Please consult us.
2)*For application of force outside the center of the shaft en,see 9.2.
3)The min.requirement of the foundation bolt is class 8.8.
the foundation must be dry and grease-free.Permissible additional radial force on input shaft d1 is upon request.

6.2输出轴d2上允许的附加径向力Permissible additional radial forces on output shaft d2:

作用力不在轴端中部
The application of forces
outside the center of shaft end

$$F_{RZ2} = F_{R2} \times k$$



F_{RZ2} 允许的轴端外部径向力
Permissible external radial force

F_{R2} 允许的附加径向力
Permissible additional radial force

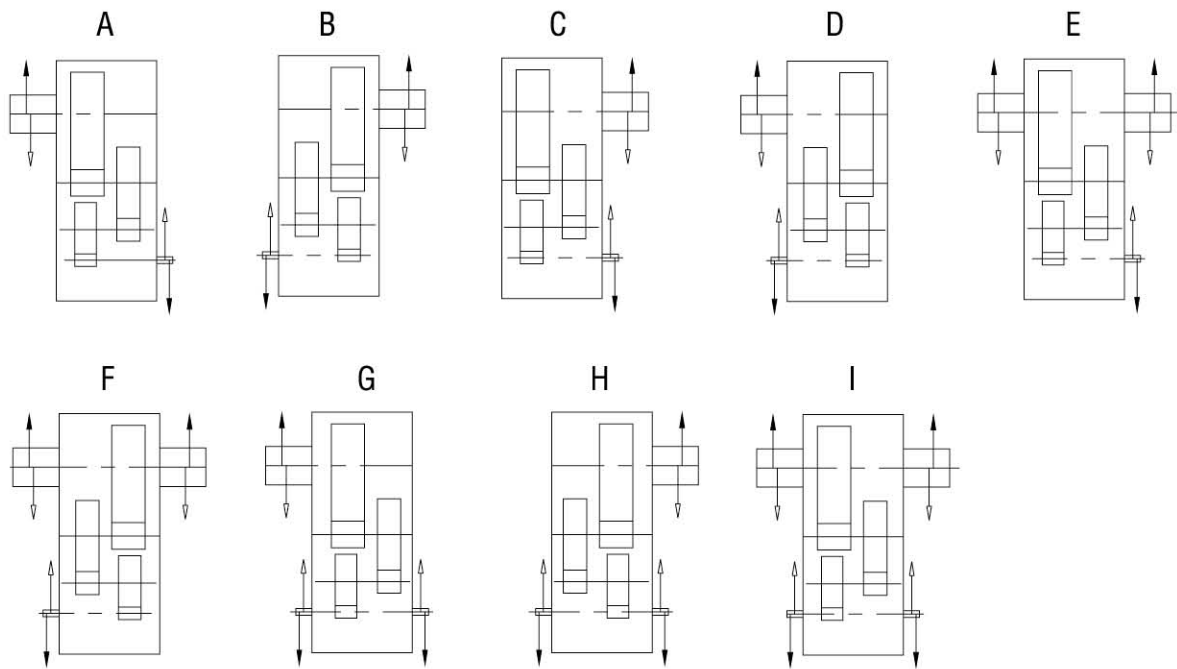
k 作用力系数根据下表确定
The factor for action force is in
the tale below.

作用力系数k Factor for action force(k)

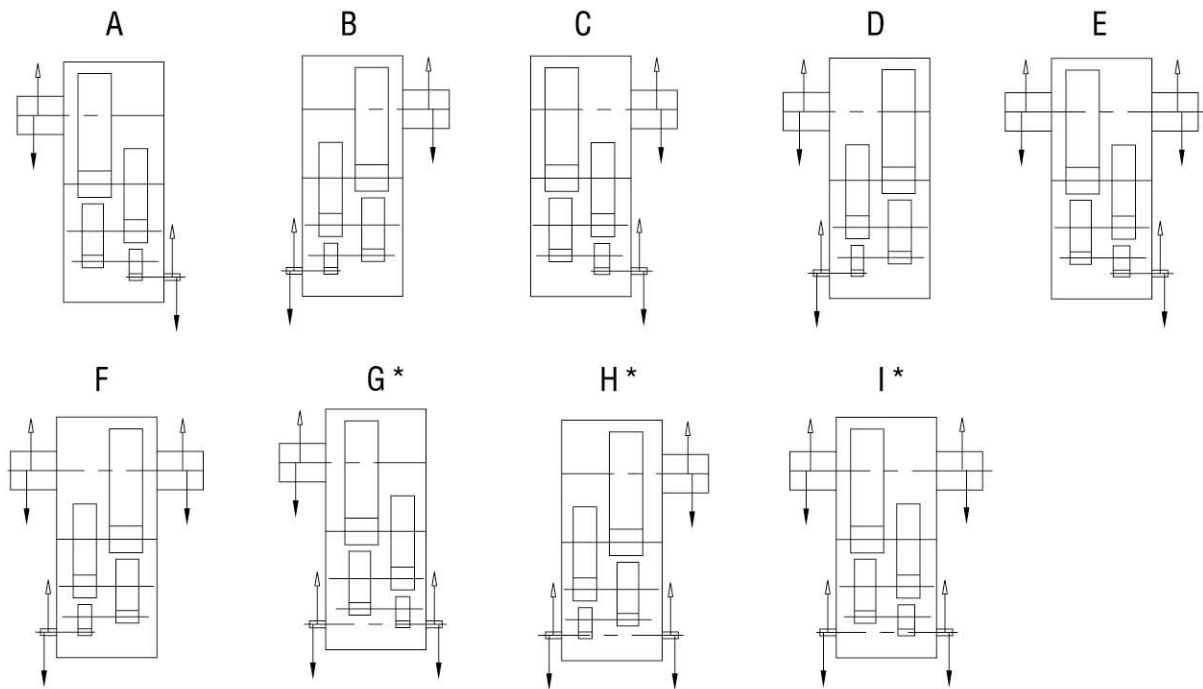
规格 Size	距离 Distance z(mm)															
	-250	-200	-150	-100	-75	-50	-25	0	25	50	75	100	150	200	250	300
5/6					1.22	1.14	1.06	1	0.88	0.79	0.72	0.66	0.62	0.52	0.44	
7/8					1.19	1.12	1.06	1	0.89	0.81	0.74	0.68	0.58	0.51	0.46	0.41
9/10				1.22	1.15	1.1	1.05	1	0.9	0.82	0.76	0.7	0.61	0.54	0.48	0.44
11/12				1.18	1.13	1.08	1.04	1	0.91	0.84	0.78	0.73	0.64	0.57	0.51	0.47
13/14			1.24	1.15	1.11	1.07	1.03	1	0.92	0.86	0.8	0.75	0.67	0.6	0.55	0.5
15/16			1.2	1.12	1.09	1.06	1.03	1	0.93	0.87	0.82	0.77	0.69	0.63	0.58	0.53
17/18		1.25	1.17	1.11	1.08	1.05	1.03	1	0.94	0.88	0.84	0.79	0.72	0.66	0.6	0.56
19/20		1.22	1.13	1.1	1.06	1.04	1.02	1	0.95	0.9	0.85	0.81	0.74	0.69	0.62	0.58
21/22	1.27	1.21	1.12	1.09	1.05	1.04	1.02	1	0.96	0.92	0.86	0.83	0.75	0.71	0.64	0.6

7 轴布置形式及旋转方向关系 Shaft arrangement and rotating direction

TLK3



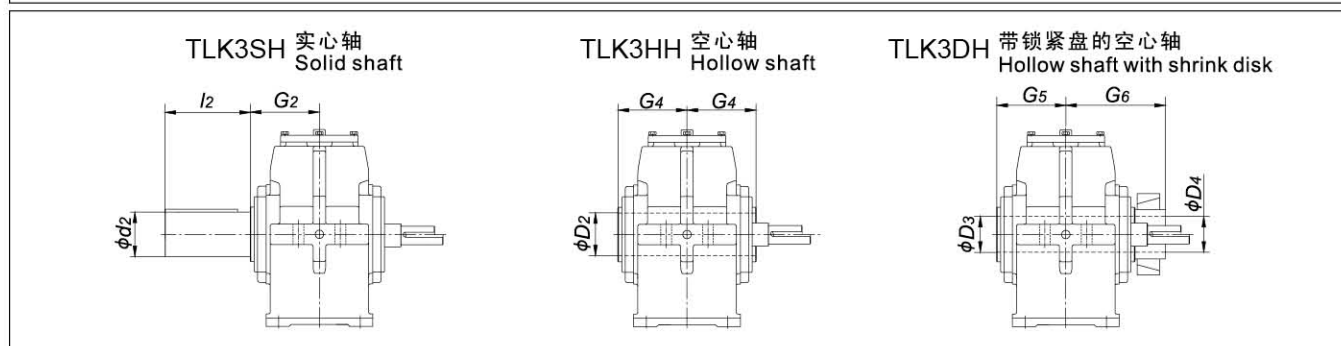
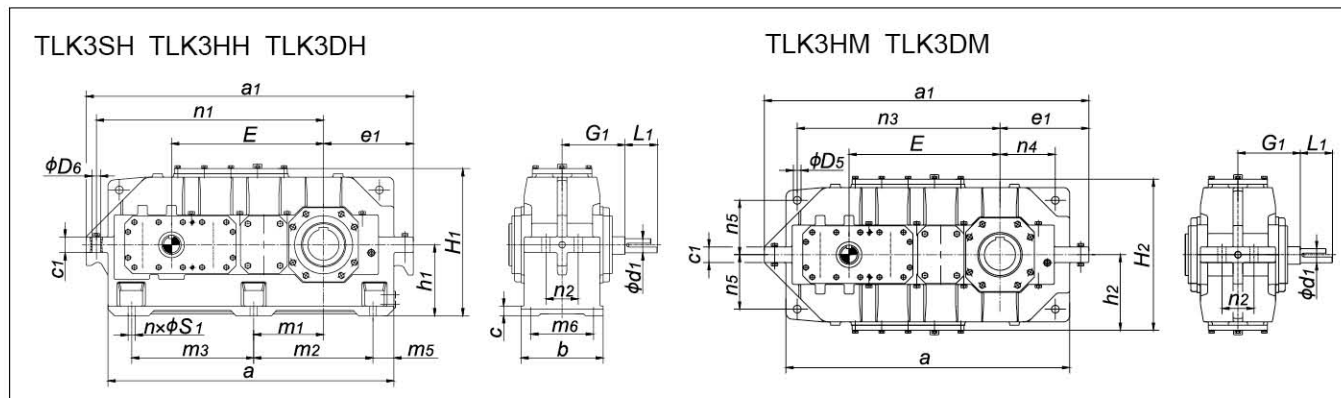
TLK4



*)布置形式 G/H/I 为右表中iN时不 可供货 *)Designs G/H/I with iN values shown in the right hand table are on request	Size Type iN	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	TLK3	45 50	56 63	40 45 50	50 56 63	40 45 50	50 56 63	45 50	56 63	40 45 50	50 56 63	50 56	56 63	50 56	56 63	50 56	56 63	50 56	56 63
	TLK4	180 200	224 250	180 200	224 250	200	250	180 200	224 250	180 200	224 250	/	/	/	/	/	/	/	/

8 外形及安装尺寸 Outline dimensions

TLK3.H5~TLK3.H14

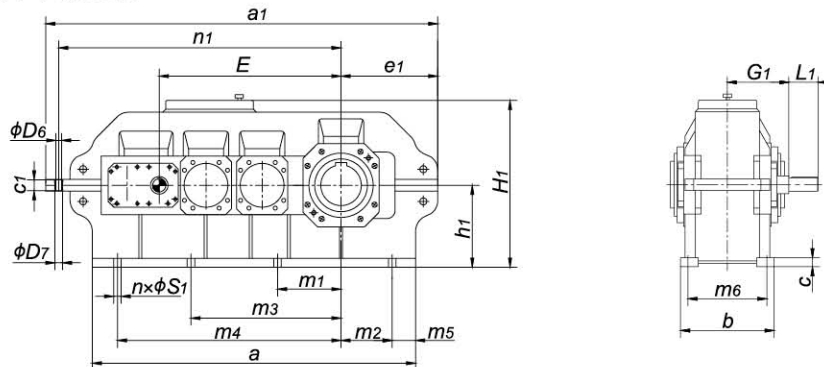


规格 Size	iN=14-25		iN=18-31.5		iN=28-50		iN=35.5-63		a1	a	b	c	c1	D5	D6
	d1	L1	d1	L1	d1	L1	d1	L1							
5	50k6	100			38m6	80			1015	887	255	30	49	24	26
6			50m6	100			38k6	80	1100	972	255	30	49	24	26
7	60m6	135			50m6	110			1155	1025	320	30	59	24	33
8			60m6	135			50k6	110	1235	1106	320	30	59	24	33
9	75m6	140			60m6	140			1335	1190	390	35	69	36	33
10			75m6	125			60m6	140	1435	1290	390	35	69	36	33
11	90m6	165			70m6	140			1570	1418	470	45	79	40	39
12			90m6	165			70m6	140	1710	1556	470	45	79	40	39
13	100m6	205			85m6	170			1830	1647	545	55	89	48	39
14			100m6	205			85m6	170	1970	1783	545	55	89	48	39

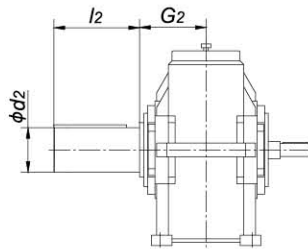
规格 Size	e1	E	G1	h1	h2	H1	H2	m1	m2	m3	m5	m6	n1	n2	n3
5	278	472	195	220	245	465	490	217	375	375	60	215	705	100	635
6	328	507	195	230	255	485	510	207	420	420	55	215	740	100	670
7	272	577	210	240	265	505	530	290	430	430	80	270	845	110	765
8	308	622	210	280	305	585	610	295	470	470	80	270	890	110	810
9	320	675	240	280	325	605	650	340	500	500	95	330	980	130	890
10	370	725	240	320	365	685	730	340	550	550	95	330	1030	130	940
11	370	815	275	320	365	685	730	405	605	605	104	400	1160	150	1070
12	440	885	275	380	425	805	850	405	675	675	104	400	1230	150	1130
13	430	950	330	380	435	815	970	472.5	712.5	712.5	110	465	1355	170	1240
14	500	1020	330	440	495	935	990	472.5	782.5	782.5	110	465	1425	170	1305

规格 Size	n4	n5	n	s1	d2	D2	D3	D4	G2	G4	G5	G6	l2	润滑油 Oil(L)	重量 wt.(kg)
5	180	170	6	22	100m6	95H7	100H7	100H7	165	165	165	240	210	20	437
6	225	170	6	22	110n6	105H7	110H7	110H7	165	165	165	240	210	24	506
7	180	190	6	26	120n6	115H7	120H7	120H7	195	195	195	280	210	32	700
8	215	225	6	26	130n6	125H7	130H7	130H7	195	195	195	285	250	40	800
9	210	215	6	33	140n6	135H7	140H7	140H7	235	235	235	330	250	50	1100
10	260	255	6	33	160n6	150H7	150H7	150H7	235	235	235	350	300	60	1270
11	260	260	6	39	170n6	165H7	165H7	165H7	270	270	270	400	300	85	1770
12	310	310	6	39	180n6	180H7	180H7	180H7	270	270	270	405	300	115	2100
13	300	300	6	45	200n6	190H7	190H7	190H7	335	335	335	480	350	135	2760
14	350	360	6	45	210n6	210H7	210H7	210H7	335	335	335	480	350	170	3300

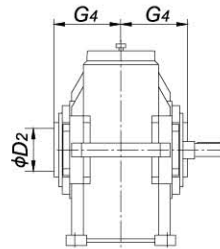
TLK3SH TLK3HH TLK3DH



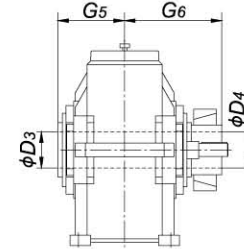
TLK3SH 实心轴
Solid shaft



TLK3HH 空心轴
Hollow shaft



TLK3DH 带锁紧盘的空心轴
Hollow shaft with shrink disk



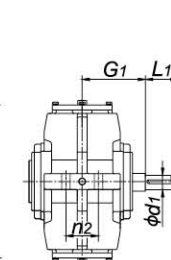
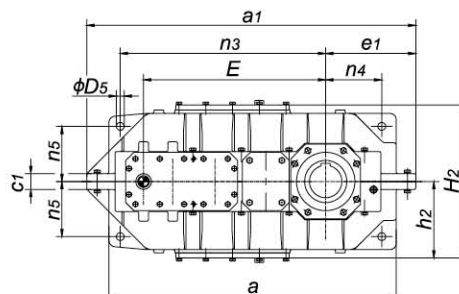
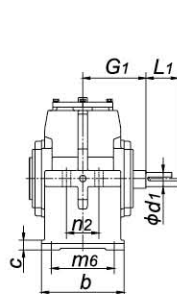
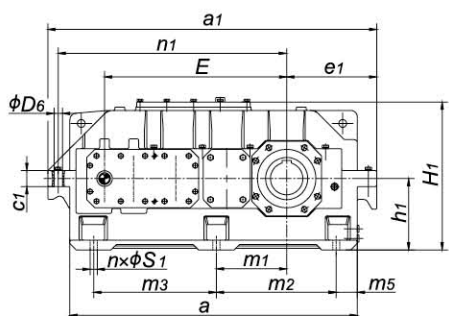
规格 Size	iN=18-31.5		iN=20-35.5		iN=35.5-63		iN=40-63		a1	a	G1	b	c
	d1	L1	d1	L1	d1	L1	d1	L1					
15	100m6	205			85m6	170			2050	1660	330	595	40
16			100m6	205			85m6	170	2145	1750	330	595	40
17	120m6	210			100m6	210			2270	1870	365	655	45
18			120n6	210			100m6	210	2400	2000	365	655	45
19	125m6	245			110n6	210			2565	2120	420	730	50
20			125n6	245			110n6	210	2695	2250	420	730	50
21	170m6	290			140n6	250			2887	2450	495	790	55
22			170n6	290			140n6	250	3002	2565	495	790	55

规格 Size	c1	D6	D7	e1	E	h1	H1	m1	m2	m3	m4	m5	m6
15	74	39	71	525	1067	440	945	235	315	705	1175	85	520
16	74	39	71	575	1113	500	1060	280	360	750	1220	85	520
17	74	39	71	565	1205	500	1070	270	350	810	1350	85	580
18	74	39	71	635	1265	550	1160	330	420	870	1410	85	580
19	84	45	82	635	1380	550	1175	300	400	910	1520	100	645
20	84	45	82	705	1440	620	1315	360	470	970	1580	100	645
21	84	45	82	705	1592	620	1330	360	450	1060	1760	120	700
22	84	45	82	765	1647	700	1485	415	510	1115	1815	120	700

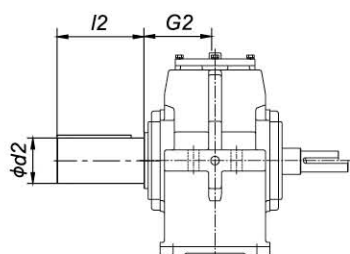
规格 Size	n1	n	s1	d2	D2	D3	D4	G2	G4	G5	G6	l2	润滑油 Oil(L)	重量 wt.(kg)
15	1475	8	42	230n6	230H7	230H7	230H7	380	380	380	550	410	180	3900
16	1520	8	42	240n6	240H7	240H7	240H7	380	380	380	550	410	195	4450
17	1655	8	42	250n6	250H7	250H7	250H7	415	415	415	600	410	210	5250
18	1715	8	42	270n6	275H7	280H7	280H7	415	415	415	600	470	240	6100
19	1870	8	48	290n6	-	285H7	285H7	465	-	470	670	470	285	7800
20	1930	8	48	300n6	-	310H7	310H7	465	-	470	670	500	360	8800
21	2120	8	56	320n6	-	330H7	330H7	490	-	490	715	500	410	10800
22	2175	8	56	340n6	-	340H7	340H7	490	-	490	725	550	520	12000

TLK4SH TLK4HH TLK4DH

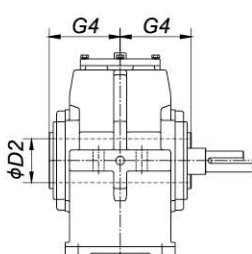
TLK4HM TLK4DM



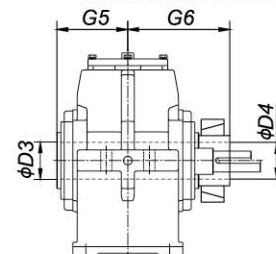
TLK4SH 实心轴
Solid shaft



TLK4HH 空心轴
Hollow shaft



TLK4DH 带锁紧盘的空心轴
Hollow shaft with shrink disk

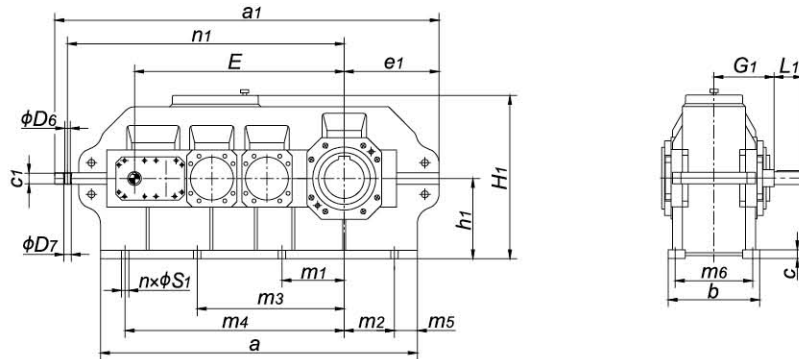


规格 Size	iN=22.4-100		iN=28-125		iN=112-140		iN=140-180		iN=160-200		iN=200-250		a	a1	b	c
	d1	L1	d1	L1	d1	L1	d1	L1	d1	L1	d1	L1				
5	40k6	90			30m6	70			24k6	60			887	1015	255	30
6			40m6	90			30m6	70			24k6	60	972	1100	255	30
7	45k6	100			35m6	80			28k6	70			1025	1155	320	30
8			45m6	100			35m6	80			28k6	70	1106	1235	320	30
9	60m6	125			45k6	100			32k6	80			1190	1335	390	35
10			60m6	125			45m6	100			32m6	80	1290	1435	390	35
11	70m6	140			50k6	110			42k6	100			1418	1570	470	45
12			70m6	140			50m6	110			42m6	100	1556	1710	470	45
13	85m6	160			60m6	135			50k6	110			1647	1830	545	55
14			85m6	160			60m6	135			50m6	110	1783	1970	545	55

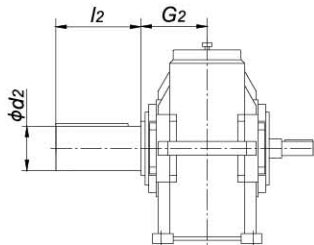
规格 Size	c1	D5	D6	e1	E	G1	h1	h2	H1	H2	m1	m2	m3	m5	m6
5	49	24	26	278	562	170	220	245	465	490	217	375	375	60	215
6	49	24	26	328	597	170	230	255	485	510	207	420	420	55	215
7	59	24	33	272	687	210	240	265	505	530	290	430	430	80	270
8	59	24	33	308	732	210	280	305	585	610	295	470	470	80	270
9	69	36	33	320	805	250	280	325	605	650	340	500	500	95	330
10	69	36	33	370	855	250	320	365	685	730	340	550	550	95	330
11	79	40	39	370	975	285	320	365	685	730	405	605	605	104	400
12	79	40	39	440	1045	285	380	425	805	850	405	675	675	104	400
13	89	48	39	430	1135	325	380	435	815	870	472.5	712.5	712.5	110	465
14	89	48	39	500	1205	325	440	495	935	990	472.5	782.5	782.5	110	465

规格 Size	n1	n2	n3	n4	n5	n	s1	d2	D2	D3	D4	G2	G4	G5	G6	I2	润滑油 Oil(L)	重量 wt.(kg)
5	705	100	635	180	170	6	22	100m6	95H7	100H7	100H7	165	165	165	240	210	20	440
6	740	100	670	225	170	6	22	110n6	105H7	110H7	110H7	165	165	165	240	210	24	515
7	845	110	765	180	190	6	26	120n6	115H7	120H7	120H7	195	195	195	280	210	32	710
8	890	110	810	215	225	6	26	130n6	125H7	130H7	130H7	195	195	195	285	250	40	800
9	980	130	890	210	215	6	33	140n6	135H7	140H7	140H7	235	235	235	330	250	50	1120
10	1030	130	940	260	255	6	33	160n6	150H7	150H7	150H7	235	235	235	350	300	60	1300
11	1160	150	1070	260	260	6	39	170n6	165H7	165H7	165H7	270	270	270	400	300	85	1800
12	1230	150	1130	310	310	6	39	180n6	180H7	180H7	180H7	270	270	270	405	300	115	2150
13	1355	170	1240	300	300	6	45	200n6	190H7	190H7	190H7	335	335	335	480	350	135	2810
14	1425	170	1305	350	360	6	45	210n6	210H7	210H7	210H7	335	335	335	480	350	170	3350

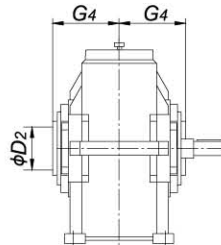
TLK4SH TLK4HH TLK4DH



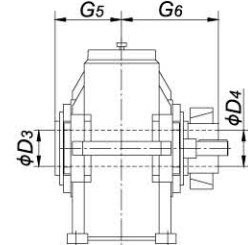
TLK4SH 实心轴
Solid shaft



TLK4HH 空心轴
Hollow shaft



TLK4DH 带锁紧盘的空心轴
Hollow shaft with shrink disk



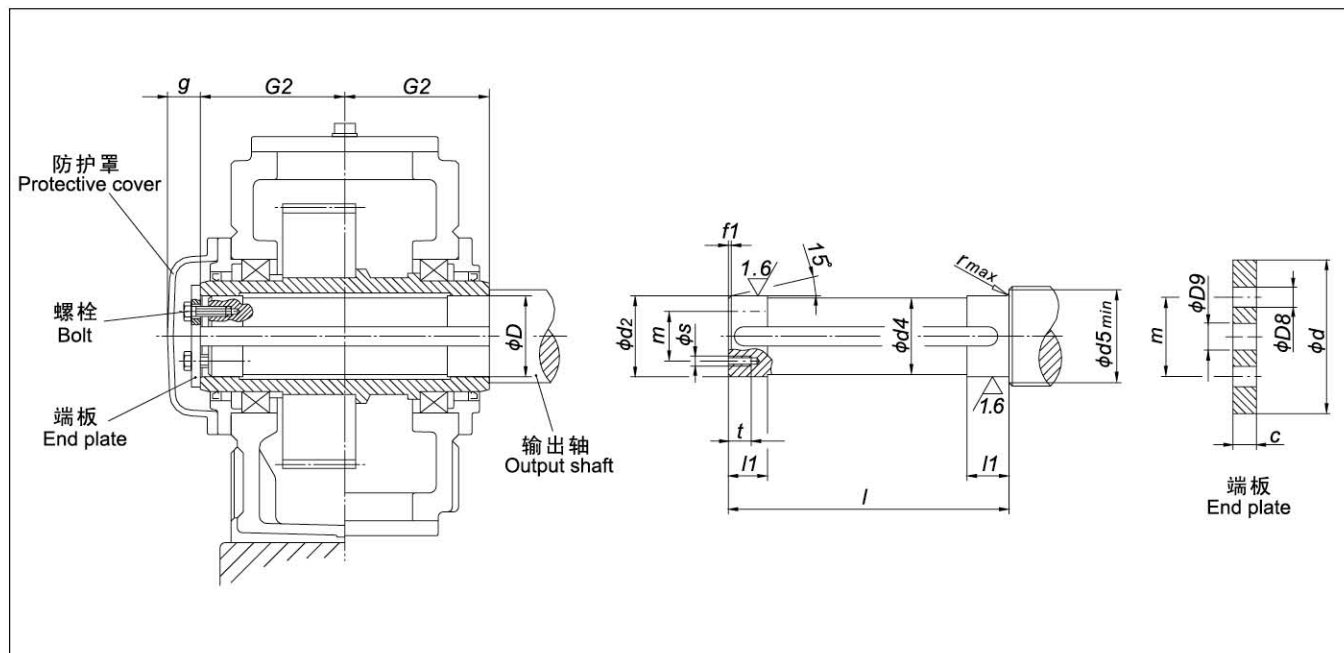
规格 Size	iN=22.4-100		iN=28-125		iN=112-180		iN=125-200		a	a1	b	c
	d1	L1	d1	L1	d1	L1	d1	L1				
15	100m6	200			75m6	140			1940	2330	595	40
16			100m6	200			75m6	140	2030	2426	595	40
17	110m6	200			90m6	165			2165	2565	655	45
18			110n6	200			90m6	165	2295	2695	655	45
19	110m6	200			90m6	165			2420	2860	730	50
20			110n6	200			90m6	165	2550	2990	730	50
21	130m6	240			110n6	205			2790	3230	790	55
22			130n6	240			110m6	205	2905	3345	790	55

规格 Size	c1	D6	D7	e1	E	G1	h1	H1	m1	m2	m3	m4	m5
15	74	39	71	525	1347	365	440	945	285	315	885	1455	85
16	74	39	71	575	1393	365	500	1060	330	360	930	1500	85
17	74	39	71	565	1500	430	500	1070	310	350	970	1645	85
18	74	39	71	635	1560	430	550	1160	370	420	1030	1705	85
19	84	45	82	635	1645	430	550	1175	360	400	1120	1820	100
20	84	45	82	705	1705	430	620	1315	420	470	1180	1880	100
21	84	45	82	705	1912	470	620	1330	420	450	1290	2100	120
22	84	45	82	765	1967	470	700	1485	475	510	1345	2155	120

规格 Size	m6	n1	n	s1	d2	D2	D3	D4	G2	G4	G5	G6	I2	润滑油 Oil(L)	重量 wt.(kg)
15	520	1755	8	42	230n6	230H7	230H7	230H7	380	380	380	550	410	185	4500
16	520	1800	8	42	240n6	240H7	240H7	240H7	380	380	380	550	410	200	5000
17	580	1950	8	42	250n6	250H7	250H7	250H7	415	415	415	600	410	245	6000
18	580	2010	8	42	270n6	275H7	280H7	280H7	415	415	415	600	470	285	7000
19	645	2165	8	48	290n6	-	285H7	285H7	465	-	470	670	470	320	8700
20	645	2225	8	48	300n6	-	310H7	310H7	465	-	470	670	500	420	9700
21	700	2465	8	56	320n6	-	330H7	330H7	490	-	490	715	500	465	12000
22	700	2520	8	56	340n6	-	340H7	340H7	490	-	490	725	550	590	13250

9建议输出联结尺寸 Dimensions for recommended output connections

9.1带平键联接的空心轴尺寸Hollow shaft with parallel keys



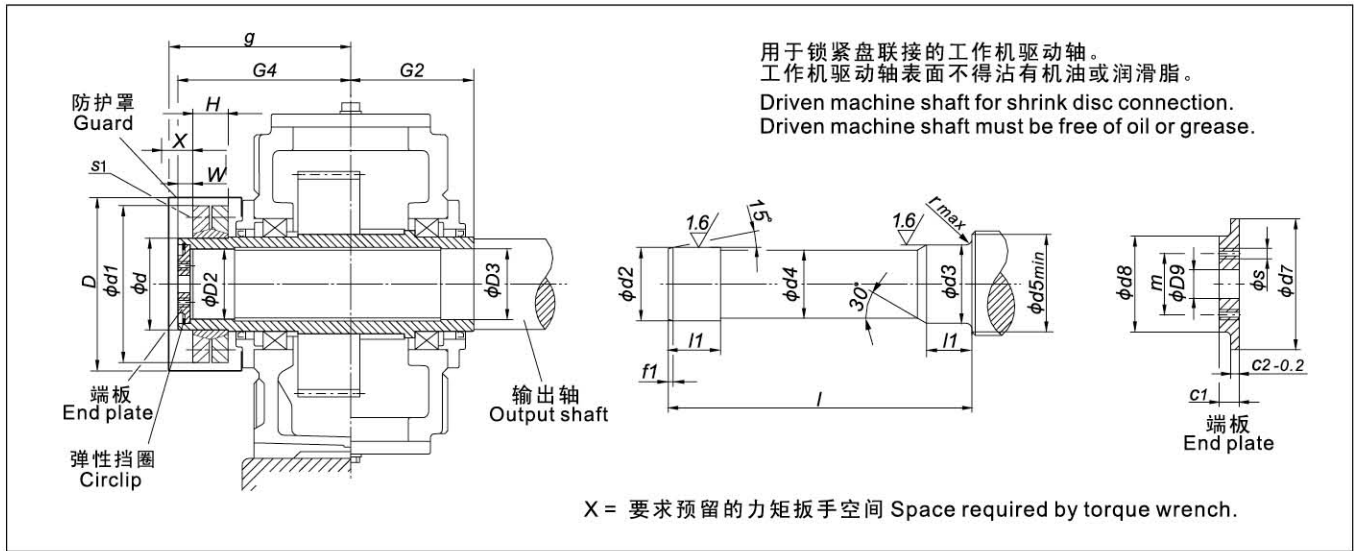
类型Type TLK3H.,TLK4H.

规格 Size	工作机驱动轴 Driven machine shaft									端板 end plate					螺栓Bolt		空心轴 Hollow shaft		
	d2	d4	d5	f1	l	l1	r	s	t	c	D8	D9	d	m	规格 Size	数量 Qty.	D	G2	g
5	95h6	94.5	105	5	328	40	1.6	M10	18	10	11	26	120	70	M10x25	2	95H7	165	40
6	105h6	104.5	116	5	328	45	1.6	M10	18	10	11	26	120	70	M10x25	2	105H7	165	40
7	115h6	114.5	126	5	388	50	1.6	M12	20	12	13.5	26	140	80	M12x30	2	115H7	195	40
8	125h6	124.5	136	6	388	55	2.5	M12	20	12	13.5	26	150	85	M12x30	2	125H7	195	40
9	135h6	134.5	147	6	467	60	2.5	M12	20	12	13.5	33	160	90	M12x30	2	135H7	235	45
10	150h6	149.5	162	6	467	65	2.5	M12	20	12	13.5	33	185	110	M12x30	2	150H7	235	45
11	165h6	164.5	177	7	537	70	2.5	M16	28	15	17.5	33	195	120	M16x40	2	165H7	270	45
12	180h6	179.5	192	7	537	75	2.5	M16	28	15	17.5	33	220	130	M16x40	2	180H7	270	45
13	190h6	189.5	206	7	667	80	3	M16	28	18	17.5	33	230	140	M16x40	2	190H7	335	45
14	210h6	209.5	226	8	667	85	3	M16	28	18	17.5	33	250	160	M16x40	2	210H7	335	45
15	230h6	229.5	248	8	756	100	3	M20	38	25	22	39	270	180	M20x55	4	230H7	380	60
16	240h6	239.5	258	8	756	100	3	M20	38	25	22	39	280	180	M20x55	4	240H7	380	60
17	250h6	249.5	270	8	826	110	4	M20	38	25	22	39	300	190	M20x55	4	250H7	415	60
18	275h6	274.5	295	9	826	120	4	M20	38	25	22	39	330	210	M20x55	4	275H7	415	60

1)工作机驱动轴材质: 40Cr或强度更高的钢。
2)工作机驱动轴及平键不在我们的供货范围之内。
如果需要的话, 请另订货。

1)Material of driven machine shaft:40Cr or higher strength steel.
2)Driven machine shaft and parallel keys don't belong to the scope of our supply,please order separately,if required.

9.2带锁紧盘联接的空心轴尺寸 Hollow shaft with shrink disk

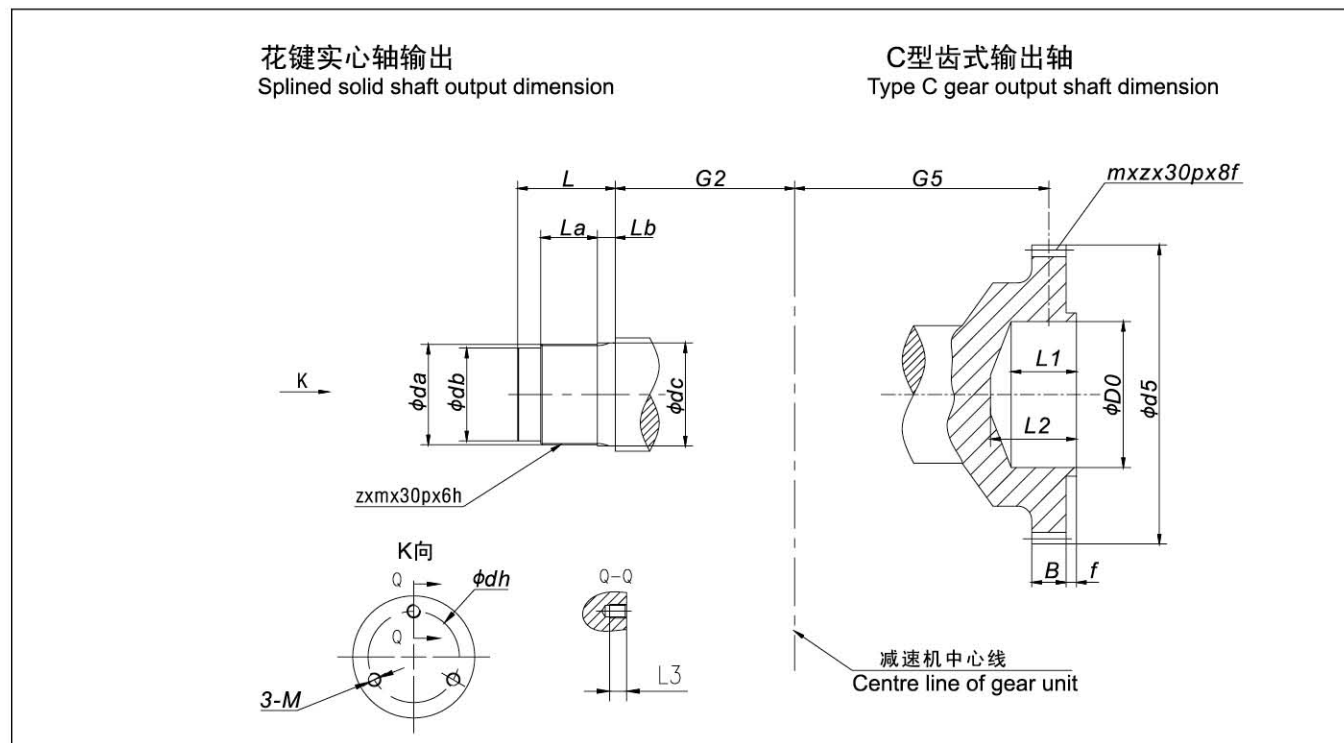


类型Type TLK3D.,TLK4D.																														
规格 Size	工作机驱动轴 Driven machine shaft2)								端板 end plate								弹性 挡圈 Circlip	空心轴 Hollow shaft				锁紧盘 Shrink disk 1)					螺栓 Boll		防护罩 Guard	
	d2	d3	d4	d5	f1	l	l1	r	c1	c2	d7	d8	D9	m	s	数量 Qty.		D2	D3	G2	G4	Type	d	d1	H	W	s1	D	g	
5	100g6	100h6	99.5	114	5	383	53	2	20	8	105	80	26	55	M10	2	105	100H7	100	165	240	SP2-125	125	215	53	20	M12	275	255	
6	110g6	110h6	109.5	124	5	383	58	3	20	8	115	85	26	60	M10	2	115	110H7	110	165	240	SP2-140	140	230	58	20	M12	285	255	
7	120g6	120h6	119.5	134	5	453	68	3	20	8	125	90	26	65	M12	2	125	120H7	120	195	280	SP2-155	155	263	62	23	M12	330	295	
8	130g6	130h6	129.5	145	6	458	73	3	20	8	135	100	26	70	M12	2	135	130H7	130	195	285	SP2-165	165	290	68	23	M16	340	300	
9	140g6	140h6	139.5	160	6	539	82	4	23	10	150	110	33	80	M12	2	150	140H7	140	235	330	SP2-175	175	300	68	28	M16	360	345	
10	150g6	150h6	149.5	170	6	559	92	4	23	10	160	120	33	90	M12	2	160	150H7	150	235	350	SP2-200	200	340	85	28	M16	395	365	
11	165f6	165g6	164.5	185	7	644	112	4	23	10	175	130	33	90	M12	2	175	165H7	165	270	400	SP2-220	220	370	103	30	M16	435	420	
12	180f6	180g6	179.5	200	7	649	122	4	23	10	190	140	33	100	M16	2	190	180H7	180	270	405	SP2-240	240	405	107	30	M20	450	420	
13	190f6	190g6	189.5	213	7	789	137	5	23	10	200	150	33	110	M16	2	200	190H7	190	335	480	SP2-260	260	430	119	30	M20	500	505	
14	210f6	210g6	209.5	233	8	784	147	5	28	14	220	17	33	130	M16	2	220	210H7	210	335	480	SP2-280	280	460	132	30	M20	525	505	
15	230f6	230g6	229.5	253	8	899	157	5	28	14	240	180	39	140	M16	2	240	230H7	230	380	550	SP2-300	300	485	140	35	M20	575	575	
16	240f6	240g6	239.5	263	8	899	157	5	28	14	250	190	39	150	M20	2	250	240H7	240	380	550	SP2-320	320	520	140	35	M20	595	575	
17	250f6	250g6	249.5	278	8	982	177	5	30	14	265	200	39	150	M20	2	265	250H7	250	415	600	SP2-340	340	570	155	35	M20	615	630	
18	280f6	280g6	279.5	306	9	982	177	5	30	14	290	210	39	160	M20	2	290	280H7	280	415	600	SP2-360	360	590	162	35	M24	635	625	
19-22	敬请垂询 On request																													

1)锁紧盘不在我们的供货范围之内。如果需要的话，请另行订货。
2)工作机驱动轴材质：40Cr或强度更高的钢。工作机驱动轴部在供货范围之内，但尺寸函索即复。

1)Shrink disk does not belong to our scope of supply,please order separately,if required.
2)Material of driven machine shaft;40Cr or highter strength steel,Driven machine shaft does not belong to our scope of supply.Dimensions on request.

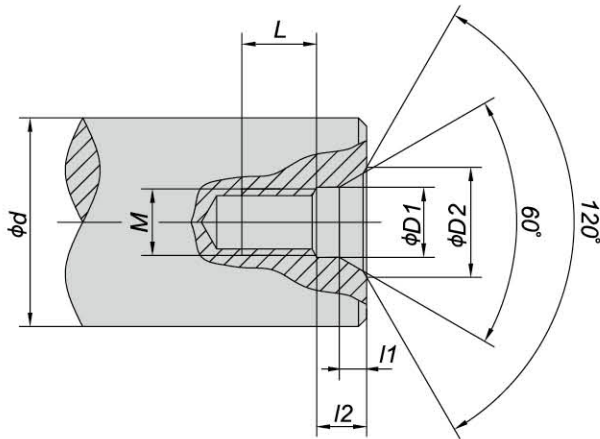
9.3花键实心轴和C型齿式输出轴尺寸Dimensions of splined solid shaft and type Coutput shaft



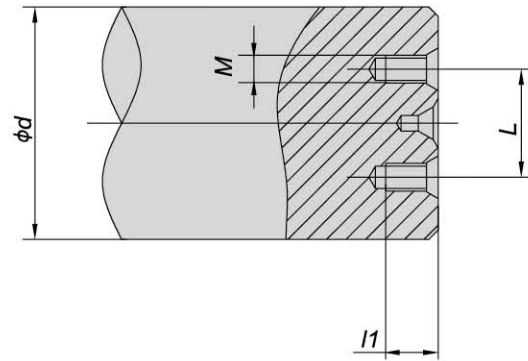
花键实心轴输出尺寸 Splined solid shaft output dimension												C型齿式输出轴尺寸 Type C gear output shaft dimension								
机座号 size	G2	zxm	da	db	dc	dh	L	La	Lb	M	L3	mxz	d5	D0	L1	L2	B	f	G5	
5	165	18x5	95h6	80h6	100	50	125	55	35	M10	17	4x56	232h11	120H7	50	75	35	14	271	
6	165	22x5	115h6	100h6	120	70	135	150	40	M12	20	4x56	232h11	120H7	50	75	35	14	271	
7	195	26x5	135h6	120h6	140	90	155	210	45	M12	20	4x56	232h11	120H7	76	100	35	14	346	
8	195	26x5	135h6	120h6	140	90	155	210	45	M12	20	4x56	232h11	120H7	76	100	35	14	346	
9	235	30x5	155h6	140h6	160	100	165	210	50	M12	20	8x54	448h11	200H7	78	100	50	15	370	
10	235	34x5	175h6	160h6	180	110	180	210	55	M16	24	8x54	448h11	200H7	78	100	50	15	385	
11	270	38x5	195h6	180h6	200	130	190	250	55	M16	24	8x54	448h11	200H7	78	100	50	15	420	
12	270	38x5	195h6	180h6	200	130	190	250	55	M16	24	8x54	448h11	200H7	78	100	50	15	430	
13	335	26x8	215h6	190h6	222	140	205	250	60	M16	24	10x48	500h11	200H7	78	100	60	35	513	
14	335	26x8	216h6	190h6	222	140	205	250	60	M16	24	10x48	500h11	200H7	78	100	60	35	513	
15	400	30x8	248h6	220h6	254	160	220	210	60	M16	24	10x48	500h11	200H7	78	100	60	35	550	
16	400	30x8	248h6	220h6	254	160	220	210	60	M16	24	10x48	500h11	200H7	78	100	60	35	575	
17	450	30x8	248h6	220h6	254	160	220	210	60	M16	24	12x54	672h11	290H7	78	100	75	45	600	
18	450	34x8	280h6	250h6	286	180	235	210	60	M20	30	12x54	672h11	290H7	78	100	75	45	625	
19	500	38x8	312h6	280h6	318	200	260	250	70	M24	40	12x54	672h11	290H7	78	100	75	45	655	
20	500	38x8	312h6	280h6	318	200	260	250	70	M24	40	12x54	672h11	290H7	78	100	75	45	675	
21	550	44x8	360h6	320h6	366	230	285	250	75	M24	40	/	/	/	/	/	/	/	/	
22	550	44x8	360h6	320h6	366	230	315	250	75	M24	40	/	/	/	/	/	/	/	/	

10 轴端螺纹孔 Screw hole in shaft end

轴端C型螺纹中心孔
Type C screw central hole in shaft end



轴端双螺孔
Double screw holes in shaft end



轴端C型螺纹中心孔尺寸 Type C screw central hole in shaft end $7 < d \leq 225$						
d	M	L	I2	I1	D1	D2
$7 < d \leq 10$	M3	10	2.6	1.8	3.2	5.8
$10 < d \leq 13$	M4	10	3.2	2.1	4.3	7.4
$13 < d \leq 16$	M5	10	4	2.4	5.3	8.8
$16 < d \leq 21$	M6	12	5	2.8	6.4	10.5
$21 < d \leq 24$	M8	12	6	3.3	8.4	13.2
$24 < d \leq 30$	M10	15	7.5	3.8	10.5	16.3
$30 < d \leq 38$	M12	20	9.5	4.4	13	19.8
$38 < d \leq 50$	M16	25	12	5.2	17	25.3
$50 < d \leq 85$	M20	30	15	6.4	21	31.3
$85 < d \leq 130$	M24	35	18	8	25	38
$130 < d \leq 225$	M30	45	18	11	31	48

轴端双螺孔尺寸 Double screw holes in shaft end $225 < d$			
d	M	I1	L
$225 < d \leq 230$	M16	28	160
$230 < d \leq 280$	M20	38	180
$280 < d \leq 290$			190
$290 < d \leq 310$	M24	45	220
$310 < d \leq 330$			230
$330 < d \leq 340$			240
$340 < d \leq 360$			250
$360 < d \leq 390$	M30	55	270
$390 < d \leq 420$			300
$420 < d \leq 460$			320
$460 < d \leq 550$			350





