

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模块化齿轮减速电机、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、葛洲坝集团、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”等殊誉。在同行业中率先通过了国家AAAAA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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一、产品简介 Product Introduction

泰隆人抱着振兴民族工业的坚定信念，以市场需求为产品设计的原动力，吸取国际先进经验，本着洋为中用，以我为主，开拓创新的精神，开发了TLMC、TLM、TLML三大系列高效重载型齿轮减速机，以满足不同用户的合理选用。

TLM系列重载型减速机是已经成熟的TLM系列产品的扩展，“L”代表大型，齿轮、齿轮轴采用优质低碳合金钢（镍铬钢）经先进的加工工艺完成，精度达6级以上，部分式箱体在高精度加工中心上加工成形，完全满足设计所规定的技术要求，设计利用模块组合方案，方便地增加附件和零件组装可以更好满足客户对驱动的要求和对机器特殊的要求。

TLM系列重载型减速机，具有体积小、重量轻、载荷大、效率高、噪声低、可靠性高、寿命长等优点，广泛应用于冶金、矿山、港口、码头、石油、化工、水泥、建筑等国民经济各个领域。

Taking the market demand as the driving force of our design, drawing on advanced international experience and with innovative spirit, we develop three series of high-efficiency heavy-duty gear reducer: TLMC, TLM and TLML , in order to meet selection of different users.

TLML series is an extension to the TLM series, "L" represents large. Gear, gear shafts are made of high quality low carbon alloy steel (Nie Gegang) by advanced processing technology, precision above 6 class. Part type box body are machining in high precision center processing. The design of the module combination can easily add accessories and parts assembly, even meet the needs of customers better on the driving requirements and special requirements for the machine.

TLM series has the advantages of small volume, light weight, large load, high efficiency, low noise, high reliability, long service, and widely used in various fields of the national economy such as metallurgy, mines, ports, docks, petroleum, chemical, cement, building etc.

二、产品标注 Product labeling

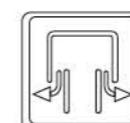
1.尺寸图及图标定义 Definition of icons used in dimensional drawings



观测盖板
Visual inspection cover



放油口
Oil drainage



通气帽
Breather plug



油位计
Oil sight glass

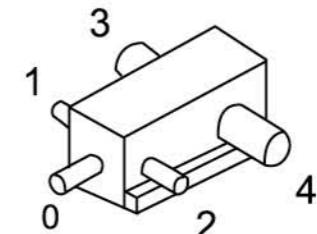


加油口
oil filler



附加提升装置
lifting attachment

2.轴的位置 Shaft positions



3.型号定义 Gear unit type definition

TLML 3 P S F 120

规格 Size:100...140

安装型式 Gear unit mounting:
F=地脚安装 Foot mounted
T=力矩臂安装座 Torque arm

出轴型式 Low speed shaft type
S=实心轴 Solid shaft
H=空心轴平键 Hollow shaft(Key)
D=空心轴锁紧盘 Hollow shaft(shrink disc connection)

结构 Gear unit type:
P=平行轴齿轮减速机 parallel shaft reducer(parallel shaft)
R=直交轴齿轮减速机 Bevel-helical gear unit(right angle shaft)

级数 Number of gear stages:
2=2级 Two stages
3=3级 Three stages
4=4级 Four stages
5=5级 Five stages

系列 Industrial gear unit series:TLML

三、选用方法 Selection method

1、减速机选择的必要参数和条件 Choosing the necessary parameters and conditions

工作机名称 Working Machine		运行功率 operating power P_{k1}	kW	P_{k2}	kW
运行转速 working speed n_2	r/min	运行转矩 Operating torque M_{k2}	KN·m	载荷特性 Load capacity	均U 中M 强H
原动机类型名称 Prive mover		额定功率 Power Rating P	kW	额定转速 Rated speed n_1	r/min
传动比 transmission ratio i			h/d	每小时正反运行、启动次数 Start times and operation per hour	次
安全可靠度要求 Safety reliability requirements		工作环境温度 Operating Temperature °C		海拔高度 Altitude	
减速机出轴型式 Output shaft type	实心、空心(键或锁紧盘) Solid hollow (key or lock plate)	输出轴负荷旋向 output shaft rotate to load	顺时针、逆时针、双向时注明主旋向 (面对输出轴看) Clockwise counterclockwise remark when two-way main handedness (see from the output shaft)		

2、减速机选择计算 Reducer selection and calculation

● 传动比 Transmission ratio

计算传动比*i*, 选择功率表中相近的公称传动比*i*_{in}。

Calculate transmission ratio *i*, select the similar nominal transmission ratio from power table

$$i = n_1 / n_2$$

● 运行功率PK1,PK2和运行转矩MK2 The power rating PK1, PK2 and running torque MK2

PK2和MK2是必要的原始功率和转矩 PK2 and MK2 are the necessary raw power and torque

$$P_{k1} = P_{k2} / \eta \quad \text{或 or} \quad P_{k1} = M_{k2} \times n_2 / 9550 \times \eta$$

式中Type:

P_{k1} 、 P_{k2}	[kW]
M_{k2}	[kN·m]
n_2	[r/min]
η 效率 Efficiency:	
一级传动 Stage1	$\eta = 0.98$
二级传动 Stage2	$\eta = 0.96$
三级传动 Stage3	$\eta = 0.94$
四级传动 Stage4	$\eta = 0.92$
五级传动 Stage5	$\eta = 0.90$

● 用系数选择减速机 Use coefficient to select reducer

减速机的选用必须考虑原动机和从动机的载荷特性系数 F_s , 每小时启动系数 F_F 和安全可靠度系数 F_i 。选择功率表中的 P_{N1} 必须大于等于 $P_{k1} \times F_s \times F_F \times F_i$

Selection of reducer must consider the load characteristic coefficient F_s of the prive mover and driven machine start coefficient per hour F_F and safety reliability coefficient F_i . The selection of power in the P_{N1} table must be greater than or equal to $P_{k1} \times F_s \times F_F \times F_i$

$$P_{N1} = P_{k1} \times F_s \times F_F \times F_i$$

载荷特性系数 Load characteristic coefficient F_s

原动机 Prive mover	每日工作时间 Daily working time h	工作机载荷特征 Load characteristics of working machine		
		U	M	H
电动机、涡轮机 液压马达 Motor, turbine Hydraulic motor	≤3	0.8	1	1.5
	<3~10	1	1.25	1.75
	>10	1.25	1.5	2
4~6缸活塞发动机 4~6 cylinder piston engine	≤3	1	1.25	1.75
	<3~10	1.25	1.5	2
	>10	1.5	1.75	2.25
1~3缸活塞发动机 1~3 cylinder piston engine	≤3	1.25	1.5	2
	<3~10	1.5	1.75	2.25
	>10	1.75	2	2.5

启动系数 Start coefficient F_F

每小时启动次数 Starting times per hour	载荷特性系数 F_s 范围 Range of load characteristic coefficient F_s		
	U	M	H
	启动系数Start coefficient F_F		
≤5	1	1	1
6~25	1.2	1.12	1.06
26~60	1.3	1.2	1.12
61~180	1.5	1.3	1.2
>180	1.7	1.5	1.3

可靠度系数 The reliability coefficient F_i

可靠度要求 Reliability requirements	一般 general	较高 Higher	高 High
	F_i	1.3~1.7	1.5~2

F_i 是为安全而人为增大载荷的倍数。不同行业应用, 可根据本行业使用经验适当选取 F_i , 表中 F_i 值仅供参考。

F_i is the ratio of security and artificial increase of load. Application of different industries, according to the industry experience in the use of appropriate F_i , value F_i in the table is for reference only

● 校核热功率 check thermal power

热功率 P_T 是实际功率, 减速机连续运转时油液温度不超过+90°C

Thermal power is the real power of PT, the oil temperature is not more than +90°C when reducer operations continuously.

$$P_T = P_{TH} \times f_1 \times f_2 \times f_3 \times f_4 \times f_5 \times f_6 \geq P_{k1}$$

式中 Type: f_1 =海拔系数 Altitude coefficient

f_2 =安装结构型式系数。安装力矩臂 $f_2=1.07$, 其他 $f_2=1.0$

$f_2=1.07$, the other $f_2=1.0$

f_3 =润滑方式系数。压力润滑 $f_3=1.10$, 浸油和飞溅 $f_3=1.0$

f_3 =Lubrication type coefficient. Pressure lubrication
 $f_3=1.10$, immersion and splash $f_3=1.0$

f_4 =运行周期系数 f_4 = Operating cycle coefficient

f_5 =风冷系数 f_5 = Air cooling coefficient

f_6 =环境温度系数

f_6 = Temperature coefficient of the environment

P_{TH} =热功率计算值 PTH = thermal power calculation

P_{k1} =运行功率 P_{k1} = operating power

运行周期系数 Coefficient of operation cycle f_4

f_4	每小时运行次数 Run times per hour %				
	100	80	60	40	20
f_4	1.0	1.06	1.16	1.35	1.78

风冷系数 Air cooling coefficient f_5

f_5	风扇冷却 Fan cooling			
	径向风扇 Radial fan	轴向风扇 Axial fan	n_1 (rpm)	
1	1.3	1.4	1.5	1.5

轴流风扇只能用于一个方向
For one direction of axial flow fan only

环境温度系数

Environmental temperature coefficient f_6

f_6	每小时运行次数 Run times per hour %				
	10	20	30	40	50
1.32	1.18	1.0	0.79	0.60	

3.载荷特征表Load characteristics table

风机类 Fan	
风机(轴向和径向)Fan (axial and radial)	U
冷却塔风扇 Cooling tower fan	M
引风机 Induced draft fan	M
螺旋活塞式风机Spiral piston wind machine	M
涡轮式风机 Turbo blower	U
建筑机械类 Construction machinery	
混凝土搅拌机 Concrete mixer	M
卷扬机 Windlass	M
路面建筑机械 Pavement construction machinery	M
化工类 Chemical class	
搅拌机 (液体) Mixer (liquid)	U
搅拌机 (半液体) Mixer (semi liquid)	M
离心机 (重型) Centrifuge (heavy)	M
离心机 (轻型) Centrifuge (light)	U
冷却滚筒 Cooling drum	M
干燥滚筒 Drying drum	M
搅拌机 The mixer	M
压缩机类 Tipo de compresor	
活塞式压缩机Piston Compressor	H
涡轮式压缩机 Compresor con turbina	M
输送机类 Transmission transmission machine	
平板传送机Transportador con placa	M
平衡块升降机Ascensor con tapa equilibrado	M
槽式传送机Transportador con canal	M
带式传送机(散状物)Belt conveyor(bulk)	M
带式传送机(块状物)Belt conveyor(lump)	H
筒式面粉传送机Transportador de harina de rodillo	U
链式传送机chain conveyor	M
环式传送机 Transportador circundante	M
货物升降机cargo elevator	M
卷场机 Volume field machine	H
倾斜卷场机Tilt volume field machine	H
连杆式传送机Transportador con brazo	M
载入升降机Ascensor de pasajeros	M
螺旋式传送机Transportador espiral	M
带式传送机Belt conveyor	M
链式槽型传送机Transportador con cadena y canal	M
绞车运输Winch transport	M
起重机类 Crane	
转臂式起重传动齿轮装置Jib type crane drive gears	M
卷场机齿轮传动装置Roll machine gear	U
吊杆起落齿轮传动装置The landing gear	U
转向齿轮传动装置Steering gear	M
行走齿轮传动装置A walking gear transmission device	H
挖泥机类Dredging machine	
筒式传送机Roller conveyor	H
筒式转向轮Cylinder type steering wheel	H
挖泥头Dredge head	H
机动绞车Motor winch	H
泵Pump	M
转向齿轮传动装置Steering gear	M
行走齿轮传动装置(履带)Running gear (crawler)	H
行走齿轮传动装置(铁轨)Running gear (track)	M
食品工业机械类The food industry machinery	
灌注及装箱机器Filling and packing machine	U
甘蔗压榨机Sugar cane crusher	U
甘蔗切断机*Sugarcane cutting machine	M
甘蔗粉碎机*Sugar cane crusher	M
搅拌机The mixer	M
酱状物吊桶Paste bucket	M
包装机 Packer	U
糖甜菜切断机Sugar beet cutting machine	M
糖甜菜清洗机	M
离心机 (重型) Centrifuge (heavy)	M
离心机 (轻型) Centrifuge (light)	U
金属滚轧机类Metal rolling mill	
钢坯剪断机*Billet shearing machine	H
链式输送机*Chain conveyor	M
冷轧机*Cold rolling mill	H
连铸成套设备*Continuous casting equipment	H
冷床*Cold bed	M
料机头*Feeding head	H
交叉转弯输送机*Cross belt conveyor	M
除锈机*Derusting machine	H
重型和中型板轧机*Heavy and medium plate mill	H
棒坯初轧机*Billet mill	H
棒坯转运机械*Billet transport machinery	H
棒坯推料机*Billet pusher	H
推床*Push bed	H
剪板机*Shearing machine	H
板材摆动升降台*Plate tilting table	M
轧辊调整装置*Roll adjusting device *	M
辊式校直机*Roller straightening machine	M
轧钢机辊道(重型)*Rolling mill roller (heavy)	H
轧钢机辊道(轻型)*Rolling mill roller (light)	M
薄板轧机*Sheet rolling mill	H
修剪切机*Pruning cutter	M
焊管机Pipe welding machine	M
焊接机(带材和线材)The welding machine (strip and wir)	M
线材拉拔机Wire drawing machine	M
薄板弯曲机床Plate bending machine	M
石油工业机械类The oil industry machinery	
输油管油泵*Pipeline pump	M
转子钻井设备Rotary drilling equipment	H
制纸机类	
压光机*Calender	H
多层纸板机*Multilayer board machine	H
干燥滚筒*Drying drum	H
上光滚筒*Polishing drum	H
搅拌机*The mixer	H
纸浆擦碎面*Pulp friction surface	H
吸水滚*Water roll	H
吸水滚压机*Water roller	H

4.选型举例 Example

原始资料及计算内容 The original data and calculations	例一 Sample 1	例二 Sample 2
工作机名称 Machine name	传送机Conveyor	线材拉拔机Wire drawing machine
负载特性 [U,M,H] Load characteristics [U,M,H]	M	M
运行转速 n_2 (r/min) Running speed(n_2 (r/min)	38.2	20
运行计算轴功率 P_{k2} [kW] Operation calculation of shaft power P_{k2} [kW]	370	395
运行驱动功率 P_{k1} , $P_{k1}=P_{k2}/\eta$ [kW] Run the driver power $P_{k1}=P_{k2}/\eta$ [kW]	393.625	420
原动机类型名称 The original motivation type name	三相异步电动机 Three phase asynchronous motor	三相异步电动机 Three phase asynchronous motor
电动机额定功率 P [kW] Motor rated power P [kW]	400	500
电动机额定转速 n_1 (r/min) Motor rated speed n_1 (r/min)	1440	1440
日工作小时数 Daily working hours	16	24
每小时正反运行, 启动次数 Every hour and running, start times	<5	<5
要求的安全可靠度 [一般, 较高, 高] The required safety reliability (general, high, high)	一般 general	较高 Higher
工作环境温度 [°C] Working environment temperature [°C]	30°C	30°
工作地海拔高度 [m] Work to the altitude [m]	200	平原地Plain
要求减速机结构型式 [平行轴, 直角轴, 水平放置, 垂直放置] Requirements of reducer structure (parallel axis, rectangular axis, horizontal, vertical)	直角轴水平放置 Horizontal rectangular axis placement	平行轴水平放置 Parallel axis horizontal
输出轴形式 [实心轴S, 空心轴H, 空心轴锁紧盘, 空心轴键连接, 贯通轴] The output shaft (S form solid shaft, hollow shaft H, hollow shaft locking plate, is connected with the hollow shaft key, through shaft)	实心轴输出 "S" The solid shaft output "S"	实心轴输出 "S" The solid shaft output "S"
减速机安装型式 [底脚F、力矩臂T] Reducer installation type The foot F, the torque arm T	地脚安装" F" Install the foot "F"	地脚安装" F" Install the foot "F"
轴的位置 The position of the shaft	03	24
减速机选择 Reducer selection		
传动比 $i = n_1/n_2$ Transmission ratio $i = n_1/n_2$	1440/38.2=37.69:1	1440/20=72:1
最接近公称传动比 i_N The most close to the nominal transmission ratio i_N	40:1	71:1

原始资料及计算内容 Raw data and calculation	例一 Sample 1	例二 Sample 2
减速机基本代号和效率 η The basic code and efficiency η	TLML3RSF $\eta=0.94$	TLML3PSF $\eta=0.94$
工作机载荷特性系数 F_s Work machine load characteristic coefficient F_s	1.25	1.5
每小时启动系数 F_F Each hour start coefficient F_F	1	1
安全可靠度系数 F_i The reliability coefficient F_i	1.3	1.5
所选减速机额定功率 P_{N1} The rated power of PN1 reducer P_{N1}	$393.625 \times 1.25 \times 1 \times 1.3 = 639.64$	$420 \times 1.5 \times 1 \times 1.5 = 945$
$P_{N1} \geq P_{K1} \times F_s \times F_F \times F_R$	M3RSF110-40, $P_{N1}=656$ $P_{N1}=656 > 639.64$	M3PSF140-71, $P_{N1}=1040$ $P_{N1}=1040 > 945$
减速机负载旋向 Load rotating speed reducer	顺时针旋转 Clockwise rotation	
选择检查和应用要求 Select check and application requirements		
减速机精确传动比i precise transmission ratio speed reducer i	40	71
检查热功率 P_T (KW) check the thermal power P_T (KW)	查表 $P_{TH}=285$ Table $P_{TH}=285$	$P_{TH}=672$
$P_T=P_{TH} \times f_1 \times f_2 \times f_3$	$PK1 > PT, 393.625 > 285$	$420 < 672$
冷却型式 Cooling type	风扇冷却 Fan cooling	不要冷却 NO
润滑方法 Lubrication method	飞溅润滑 Splash lubrication	飞溅润滑 Splash lubrication
最终的选择 The final choice	TLML3RSF110-40-03 负载旋向：顺时针旋转 TLML3RSF110-40-03 Load rotating clockwise rotation	TLML3PSF140-71-24

四、订购须知 Order information

订购TLML系列重载型减速机，除提出上节所述基本代号外，还应明示轴的位置。

轴的位置用数字组合表示。例：输入位置为1.输出位置为4，即14

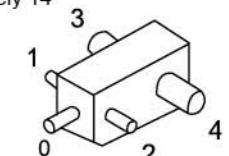
Order TLML series heavy-duty reducer, in addition to the section on the basic code, you should also express the shaft position. The position of the shaft is represented by the combination of numbers. For example: the input position for 1 output position is 4, namely 14

◎ 低速轴为空心轴时，请明示锁紧盘或键联接。

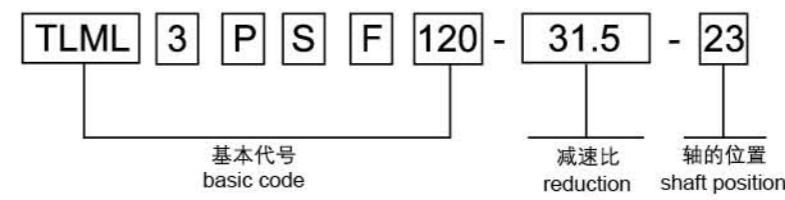
◎ Please express the locking plate or key when The low speed shaft is a hollow shaft, please express connection.

◎ 高速轴、低速轴为贯通轴时请明示。

◎ Please express when the high speed shaft, low speed shaft is a through shaft.



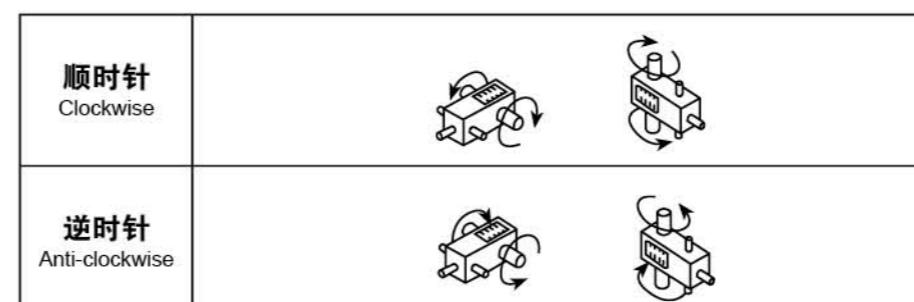
1.订购代号组合示例 Order code combination



◎ 附加说明 Additional instructions

● 需要减速机附带逆止器时，输出轴旋转方向，请按图示用文字说明顺时针或逆时针。

When non-return device is required, please indicate the output shaft rotation direction with the words below:



● 锥齿轮--斜齿轮减速器(直交轴)，须标明输出轴负载旋转方向，旋向的判别方式与上图相同。直接用文字表示，即：顺时针旋转;逆时针旋转;双向旋转。

Bevel gear, helical gear reducer (rectangular axis), shall indicate the direction of rotation, the output shaft load spin directly to a way of identifying the same as the above said in words, i.e., clockwise; Counterclockwise rotation; Two-way rotation

● 输出轴端需要安装法兰时，须用文字标明。Please indicate when the output shaft end flanges is needed.

● 冷却方法 Cooling method

根据热功率校核，需要加风扇的须用文字标明风扇冷却;并写明风扇数量，需安装强制冷却的亦应文字说明。

According to the thermal power check, if a fan is needed, please indicate fan cooling and the quantity with words; install a forced cooling should also be indicated.

2.减速机用油 Lubricating oil for reducer

本系列减速机出厂不带油！ This series reducer is without oil!

请在使用前按油位计的指示范围加入润滑油(外形安装尺寸表中的油量仅为参考值，不能作为加油的依据)，下表给出减速机在不同的环境温度时，推荐采用的润滑油(矿物油)粘度牌号，润滑方式见各型号额定机械功率表。

Please add lubricating oil within the range of oil level gauge (oil mass in outline installation drawing

only for reference, not as the basis) before use, the following table shows in different ambient temperature, lubricating oil recommended (mineral oil) viscosity, lubrication type see mechanical power rating table of various sizes

推荐采用的润滑油(矿物油)粘度牌号

Viscosity selection mineral base gear oils

低速轴转速 Revolutions of low speed shaft(r/min)	标准 Standards	环境温度 Ambient temperature °C					
		从Form -10	到To +15	从Form 0	到To 30	从Form 10	到To 50
≤100	ISO GB AGMA	VG150 L-CKD150 4EP	VG320 L-CKD320 6EP	VG460 L-CKD460 7EP			
>100	ISO GB AGMA	VG100 L-CKD100 3EP	VG220 L-CKD220 5EP	VG320 L-CKD320 6EP			

当环境温度低于-10°C时，应增加润滑油预加热器。

对国产油，推荐采用重负荷工业齿轮油，对进口油，可采用Mobil、BP、ESSO等牌号。

矿物油允许的工作温度范围一般为-10°C到+90°C，个别允许100°C。

合成油具有更高的热稳定性，同样条件下可采用稍低的粘度牌号。正常使用的温度范围一般为-20°C到+100°C，最高可允许110°C以上。可采用紫王冠，Mobil等牌号，特殊工况的用油请向工厂咨询。

A preheater is needed, when ambient temperature is lower than -10°C.

Some examples of mineral base gear oils as follows: domestic industrial gear oils for heavy duty, or brands-Mobil, Bp, ESSO and so on. They are suitable for operating temperatures from -10°C to +90°C, briefly to +100°C.

Synthetic gear oils have high aging resistance and favorable effect on the efficiency of the gear unit and the lower viscosity can be used than mineral oils under a same condition. They are suitable for operating temperatures from -20°C to +100°C, briefly to +100°C. The brands ROYAL PURPLE, Mobil can be used.

For the selection of lubricant of special operating conditions, please refer to us.

3.防锈标准Antirust

内部防锈期，一般为出厂后库房内存放6个月。对出口产品或超出以上期限时，定货时请予以说明。

The allotted antirust time for the inside parts of gear unit in store is normal 6 months from delivery. If the time of store will be greater, please indicate in order.

4.安装Mounting

安装场所和设备的使用请遵守有关安全规程。

The mounting of gear units must obey the safety rules of the national and local governments.

地脚螺栓的强度应达到8.8级。He strength of found bolts is class 8.8.

请注意原动机轴（通常是电动机）和减速器输入轴的轴径匹配，如果二者的轴径相差较大，通常应使较粗的电动机轴承受联轴器（如限矩型液力偶合器）的重量，使减速器的输入轴承受弹性联轴器的输出侧的重量。

Great care should be taken if the diameters are matching each other between the shaft of prime mover (usually it is a motor) and the input shaft of gear unit. If there is a great difference between them, usually stronger motor shaft should be used to take the weight of coupling (such as the fluid coupling), the gear unit shaft carries the output side of the flexible coupling.

安装时应严格对中，严格对中会对减少振动、延长轴承的使用寿命、保证高可靠度的工作起明显的作用。

Exact alignment between the input shaft of gear unit and prime motor or between the output shaft of gear unit and the shaft of driven machine plays an important role in reducing vibration, lasting bearing's service life, and ensuring the high reliability operating of the gear unit.

其余要求请详见随机所带的使用说明书。

Please refer to the operating instructions accompanied with the unit for more details.

5.最后的选择The final choice

本公司对减速机选择的正确性负责，用户对所提供的原始资料、载荷情况和技术要求负责

The company is responsible for the correctness of reducer selection, requires the user to provide original data load and technical director

五、技术参数 The technical parameters**1.平行轴减速机额定机械功率(TLML2P,TLML3P,TLML4P)**

Rated mechanical power of parallel shaft reducer (TLML2P, TLML3P, TLML4P)

规格 size TLML2P..	输入转速 n_1 [rpm]	额定机械功率 Nominal mechanical power ratings P_{n1} [kW]									
		公称传动比 Nominal ratio i_N									
100	1800	4019	3758	3496	3232	2968	2703	2703	2437	2327	1995
	1500	3538	3308	3077	2845	2612	2379	2379	2145	1953	1662
	1200	3026	2829	2632	2433	2151	2035	2035	1805	1577	1330
	1000	2663	2490	2316	2142	1806	1791	1748	1515	1324	1108
110	1800	6027	5625	5223	4821	4061	3671	3244	3011	2733	2414
	1500	5337	4981	4625	4160	3417	3082	2723	2528	2294	2026
	1200	4587	4162	3760	3366	2763	2488	2198	2041	1852	1636
	1000	3852	3494	3157	2828	2321	2088	1846	1713	1555	1374
120	1800	-	-	-	-	-	-	-	-	-	-
	1500	6586	6147	5489	5049	4610	4401	4078	3305	2892	2751
	1200	5676	5298	4730	4351	3760	3552	3291	2670	2335	2030
	1000	5026	4691	4188	3853	3158	2982	2763	2242	1960	1865
130	1800	-	-	-	-	-	-	-	-	-	-
	1500	9023	8422	7820	7218	6617	5813	4664	4601	4041	3960
	1200	7776	7257	6739	6221	5702	4701	3770	3719	3265	3197
	1000	6886	6427	5968	5445	4802	3949	3165	3123	2742	2685
140	1800	-	-	-	-	-	-	-	-	-	-
	1500	-	-	-	-	-	-	-	-	-	-
	1200	9657	9034	8100	7476	6853	6230	5781	5064	4673	4492
	1000	8552	8000	7173	6621	6069	5374	4856	4252	3923	3770

规格 size TLML3P..	输入转速 n_1 [rpm]	额定机械功率 Nominal mechanical power ratings P_{n1} [kW]									
		公称传动比 Nominal ratio i_N									
100	1800	1457	1365	1275	1117	854	854	785	683	609	472
	1500	1283	1201	1097	930	752	740	654	574	507	415
	1200	1036	971	876	743	643	592	523	464	406	352
	1000	871	809	730	619	542	493	436	390	338	295
110	1800	2140	1947	1495	1442	1330	1232	1096	970	766	723
	1500	1797	1635	1316	1269	1171	1084	912	806	674	637
	1200	1452	1321	1125	1085	977	871	728	644	577	531
	1000	1219	1110	956	922	814	726	605	536	481	443
120	1800	2723	2578	2406	2226	1661	1543	1462	1360	1197	924
	1500	2397	2269	2069	1852	1462	1358	1218	1132	997	813
	1200	1965	1821	1654	1480	1237	1154	974	905	797	696
	1000	1638	1517	1377	1233	1028	962	811	754	665	612
130	1800	3874	3630	3246	2446	2404	2241	2034	1830	1621	1396
	1500	3410	3140	2701	2153	2115	1939	1696	1524	1350	1163
	1200	2759	2508	2158	1841	1713	1550	1356	1218	1080	930
	1000	2296	2088	1797	1616	1426	1291	1129	1015	900	775
140	1800	-	-	-	-	-	-	-	-	-	-
	1500	4610	4141	3869	3639	3255	2521	2425	2218	1956	1671
	1200	3944	3516	3174	2915	2600	2157	1992	1773	1563	1336
	1000	3470	2927	2642	2427	2165	1894	1659	1477	13	

规格 size	输入转速 n_i [rpm]	额定机械功率Nominal mechanical power ratings P_{N1} [kW]													
		公称传动比 Nominal ratio i_N													
TLML4P..	71	80	90	100	112	125	140	160	180	200	225	250	280	315	
100	1800	483	369	331	310	283	261	233	210	186	166	146	130	121	96
	1500	407	325	291	272	249	222	201	177	156	139	123	109	102	81
	1200	329	278	249	233	209	186	168	143	126	113	99	88	82	65
	1000	277	238	219	201	175	160	142	120	106	95	83	74	69	55
110	1800	547	509	469	435	402	381	322	308	264	237	213	200	173	153
	1500	481	448	413	381	341	325	270	259	228	202	179	168	145	128
	1200	412	383	345	311	285	272	218	209	186	163	145	136	117	104
	1000	359	329	298	261	245	232	183	176	156	137	121	114	98	87
120	1800	858	770	695	580	556	514	473	396	360	337	305	270	254	223
	1500	755	678	583	510	489	453	398	333	311	291	259	227	214	188
	1200	646	555	471	436	406	380	321	269	260	236	209	183	173	152
	1000	544	467	395	364	338	319	269	226	224	198	176	154	145	127
130	1800	1163	905	840	780	764	685	612	558	502	454	427	383	352	295
	1500	969	797	739	686	650	583	530	482	434	392	369	330	302	248
	1200	775	681	631	587	544	488	443	403	363	328	306	269	244	200
	1000	646	584	525	496	470	422	383	348	312	277	257	226	205	169
140	1800	1659	1510	1355	1120	1035	943	850	770	697	633	570	542	478	423
	1500	1403	1270	1140	986	911	830	734	666	603	547	486	458	402	356
	1200	1135	1027	927	843	773	681	615	558	504	445	393	370	325	287
	1000	955	876	786	718	644	572	532	482	436	374	330	311	273	242

规格 size	输入转速 n_i [rpm]	额定机械功率Nominal mechanical power ratings P_{NI} [kW]													
		公称传动比 Nominal ratio i_N													
TLML4R..	63	71	80	90	100	112	125	140	160	180	200	225	250	280	
100	1800	464	451	403	367	310	276	243	231	203	188	167	140	139	114
	1500	409	379	339	309	273	243	214	194	176	162	144	117	117	96
	1200	347	307	275	250	221	199	175	157	147	134	117	96	95	78
	1000	292	258	232	214	185	167	147	132	124	113	97	80	80	65
110	1800	582	582	537	509	417	359	333	294	274	252	230	209	188	133
	1500	512	502	451	428	367	316	281	252	237	218	198	180	160	113
	1200	438	402	365	346	300	270	235	211	198	182	165	147	129	92
	1000	385	335	309	291	259	238	203	182	171	157	137	123	108	77
120	1800	922	873	697	673	575	535	472	443	357	338	303	273	249	239
	1500	777	734	614	565	506	450	400	379	309	292	262	235	214	206
	1200	628	594	525	455	433	372	335	317	259	244	215	197	154	154
	1000	529	500	446	382	378	322	289	274	223	209	179	170	130	130
130	1800	1350	1000	1000	900	822	724	678	612	546	502	455	391	353	333
	1500	1125	880	880	792	692	609	575	528	472	434	393	338	305	285
	1200	900	753	725	662	566	509	481	442	395	357	314	282	255	230
	1000	750	656	616	558	490	440	416	382	333	300	262	244	219	194
140	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1500	1530	1327	1251	1035	990	872	821	754	651	597	537	492	399	341
	1200	1237	1074	1012	885	807	726	688	632	543	490	434	412	323	276
	1000	1041	903	852	772	698	628	595	546	456	412	364	356	271	232

2. 直交轴减速机额定机械功率(TLML3R, TLML4R, TLML5R)

Rated mechanical power of orthogonal axes reducer (TLML3R, TLML4R, TLML5R)

规格 size	输入转速 n_i [rpm]	额定机械功率Nominal mechanical power ratings P_{N1} [kW]														
		公称传动比 Nominal ratio i_N														
TLML3R..		14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	1800	1822	1664	1470	1415	1274	1159	1086	845	780	663	592	495	451	383	331
	1500	1604	1465	1294	1197	1070	974	913	721	650	558	498	412	376	322	279
	1200	1372	1196	1107	967	865	787	738	582	520	452	402	330	301	260	227
	1000	1200	1010	931	813	727	662	620	488	433	377	338	275	250	219	191
110	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1500	2337	2052	1760	1676	1509	1373	1164	1018	758	656	655	549	496	391	372
	1200	1961	1670	1505	1353	1217	1109	936	814	607	525	525	439	397	318	298
	1000	1646	1408	1287	1136	1020	932	780	679	505	437	435	366	331	268	248
120	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1500	3081	2687	2290	2259	1860	1758	1534	1350	1200	1053	916	867	743	631	544
	1200	2552	2199	1959	1823	1591	1480	1312	1080	974	843	741	701	594	510	440
	1000	2162	1858	1724	1531	1355	1243	1111	900	820	702	618	589	495	429	370
130	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1500	3714	3439	3141	3141	2801	2399	2386	1740	1712	1371	1371	1247	1082	957	823
	1200	3114	2825	2641	2641	2396	1984	1906	1499	1366	1182	1162	1059	865	777	662
	1000	2641	2390	2201	2201	2002	1662	1587	1301	1136	1014	968	882	721	654	551
140	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1200	3949	3833	3390	3246	3160	2680	2646	2054	1926	1657	1515	1345	1200	1057	918
	1000	3377	3250	2862	2723	2654	2247	2222	1817	1616	1381	1263	1130	1009	881	765

注意 功率：功率为额定值，使用系数 $F_s=1.0$

润滑: 当使用功率 P_{k1} 大于500kW时, 建议用压力润滑

冷却：如果实际传递的机械功率 P_k1 大于热功率，需要用人工冷却

Note Power ratings:the ratings are nominal,service factor $F_s=1.0$

Lubrication: Pressure lubrication is highly recommended where

Cooling: Additional cooling is required, when the running power rating P_{k1} is higher than the thermal rating P_1

规格 size	输入转速 n _i [rpm]	额定机械功率Nominal mechanical power ratings P _{Ni} [kW]													
		公称传动比 Nominal ratio i _N													
TLML5R..		280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
100	1800	119	119	106	94	83	80	72	66	61	51	45	39	36	31
	1500	105	99	88	78	69	68	60	56	51	42	37	32	30	26
	1200	86	79	71	63	55	54	48	45	41	34	30	26	24	21
	1000	72	66	59	52	46	45	40	37	34	28	25	21	20	17
110	1800	175	168	142	130	126	108	101	88	73	64	60	52	46	41
	1500	152	145	125	108	106	90	84	74	61	53	50	43	39	34
	1200	124	121	102	87	85	72	67	59	49	42	40	35	31	27
	1000	104	101	85	73	71	60	56	49	41	35	33	29	26	22
120	1800	252	234	210	179	165	142	132	126	119	97	87	76	67	63
	1500	210	195	175	150	141	119	111	105	99	81	73	63	56	52
	1200	168	156	141	120	113	96	89	79	79	65	59	50	44	42
	1000	140	130	117	100	94	80	75	66	66	55	49	42	37	35
130	1800	333	308	277	262	228	219	184	161	142	126	115	112	95	85
	1500	283	257	232	223	196	182	154	134	120	105	96	94	79	71
	1200	226	205	187	178	146	142	123	107	97	84	76	75	63	57
	1000	189	171	156	149	126	118	103	89	81	70	64	62	52	48
140	1800	489	449	406	371	335	299	281	232	213	186	160	150	127	125
	1500	422	387	351	319	282	250	234	194	178	155	133	125	106	104
	1200	353	322	286	255	226	200	187	155	142	124	106	100	84	83
	1000	300	269	238	212	188	167	156	129	119	104	88	83	70	69

注意 功率：功率为额定值，使用系数Fs=1.0

润滑: 当使用功率 P_{k1} 大于500kW时, 建议用压力润滑

消滑：当使用频率f1大于500Hz时，建议用消滑冷却；如果实际传递的机械功率Pk1大于热功率，需要用人工冷却

Note Power ratings: the ratings are nominal service factor $F_s=1.0$

Lubrication Pressure lubrication is highly recommended when the mechanical power rating P_{m1} is higher than 500 kW.

Lubrication: Pressure lubrication is highly recommended when the mechanical power rating P_{M1} is higher than 30 kW.

3.平行轴减速机额定输出扭矩(TLML2P,TLML3P,TLML4P)

Rated output torque of parallel shaft reducer (TLML2P, TLML3P, TLML4P)

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]										
	公称传动比 Nominal ratio i_N										
TLML2P..	5.5	6.3	7.1	8	9	10	11.2	12.5	14	16	18
100	141	146	151	156	148	167	174	173	168	160	160
110	203	204	206	206	191	194	195	196	197	198	191
120	252	261	275	284	263	281	282	262	248	272	282
130	364	376	389	397	394	368	337	357	337	379	379
140	437	452	475	491	506	508	490	502	489	541	558

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]												
	公称传动比 Nominal ratio i_N												
TLML3P..	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80
100	157	161	161	161	159	155	155	157	156	146	149	154	154
110	220	221	223	227	227	227	217	218	219	218	210	215	216
120	304	307	309	309	294	310	300	299	299	277	279	281	
130	425	425	424	424	425	425	410	410	409	394	398	401	
140	615	609	608	614	613	608	582	588	588	568	569	569	576

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]													
	公称传动比 Nominal ratio i_N													
TLML4P..	71	80	90	100	112	125	140	160	180	200	225	250	280	315
100	171	163	177	179	176	182	183	176	167	168	168	170	170	154
110	231	236	241	238	253	253	238	244	248	251	252	253	246	244
120	333	336	314	329	328	347	331	318	363	348	350	353	354	356
130	408	410	412	456	490	472	484	495	508	511	512	516	519	490
140	616	628	631	648	652	655	665	681	700	679	687	686	690	695

4.直交轴减速机额定输出扭矩(TLML3R,TLML4R,TLML5R)

Rated output torque of orthogonal axes reducer (TLML3R, TLML4R, TLML5R)

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]														
	公称传动比 Nominal ratio i_N														
TLML3R..	14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	148	139	147	147	148	148	149	134	135	131	135	123	124	124	123
110	203	194	205	207	203	209	199	198	164	160	188	169	170	157	154
120	268	262	281	285	272	273	274	258	253	252	251	271	244	239	238
130	325	333	353	404	401	386	397	355	356	363	389	389	366	362	351
140	418	460	463	483	542	516	547	503	505	487	528	499	503	500	497

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]													
	公称传动比 Nominal ratio i_N													
TLML4R..	63	71	80	90	100	112	125	140	160	180	200	225	250	280
100	164	165	167	170	168	169	170	164	177	178	177	167	177	159
110	216	215	223	232	233	238	230	236	240	245	241	243	245	192
120	308	309	314	309	327	319	327	332	323	324	318	346	302	318
130	415	408	439	439	440	452	459	469	470	472	462	490	501	476
140	584	589	591	605	621	638	647	662	667	670	673	697	605	569

规格 size	额定输出扭矩 Nominal output torque M_{N2} [kNm]													
公称传动比 Nominal ratio i_N														
TLML5R..	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250

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TLML3P.../环境温度30° Ambient air temperature 30°

规格 size TLML3P..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}]$ /n1=1000rpm											
		公称传动比 Nominal ratio i_N											
20	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	
100	-	261	265	269	272	276	280	283	287	289	292	295	298
	1	359	364	367	371	375	378	382	385	388	391	394	400
	2	483	488	491	495	499	502	506	509	512	515	518	524
110	-	322	327	332	336	341	345	350	354	357	361	365	368
	1	444	449	454	458	463	467	472	476	479	483	487	494
	2	597	602	606	611	616	620	625	629	632	636	640	646
120	-	412	419	424	430	436	442	447	453	457	462	467	471
	1	568	574	580	586	592	598	603	609	613	618	622	631
	2	763	770	776	782	788	793	799	804	809	813	818	827
130	-	491	499	505	512	520	526	533	539	544	550	556	561
	140	608	618	627	635	644	653	661	669	675	682	689	696
	140	608	618	627	635	644	653	661	669	675	682	689	702

规格 size TLML3P..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}]$ /n1=1200rpm											
		公称传动比 Nominal ratio i_N											
20	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	
100	-	254	258	262	266	270	274	278	281	284	288	291	297
	1	388	392	396	400	404	408	412	415	419	422	425	431
	2	521	526	530	534	538	542	545	549	552	555	558	564
110	-	313	319	324	329	334	339	343	347	351	355	359	366
	1	479	485	489	494	499	504	509	513	517	521	525	532
	2	644	649	654	659	664	669	673	678	681	685	689	697
120	-	401	408	414	421	427	433	439	445	449	454	459	469
	1	613	620	626	632	639	645	651	656	661	666	671	680
	2	823	830	837	843	849	855	861	867	872	877	882	891
130	-	477	486	493	501	508	516	523	529	535	541	547	553
	140	592	603	612	621	630	639	648	656	663	671	678	685
	140	592	603	612	621	630	639	648	656	663	671	678	692

规格 size TLML3P..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}]$ /n1=1500rpm											
		公称传动比 Nominal ratio i_N											
20	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	
100	-	245	250	254	258	262	267	271	275	278	281	285	291
	1	427	432	436	440	445	449	453	457	460	463	467	473
	2	573	578	582	586	591	595	599	603	606	609	613	619
110	-	302	308	313	319	324	329	334	339	343	347	351	356
	1	527	533	538	544	549	554	559	564	568	572	576	584
	2	707	713	719	724	729	735	739	744	748	752	757	765
120	-	387	394	401	408	415	421	428	434	439	444	450	460
	1	674	682	689	695	702	709	715	721	726	732	737	747
	2	905	913	919	926	933	940	946	952	962	968	973	978
130	-	460	470	477	486	494	502	509	516	523	529	535	542
	140	571	582	592	602	612	622	632	641	648	656	664	672
	140	571	582	592	602	612	622	632	641	648	656	664	679

规格 size TLML3P..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}]$ /n1=1800rpm											
		公称传动比 Nominal ratio i_N											
20	22.5	25	28	31.5	35.5	40	45	50	56</th				

6. 直交轴减速机热功率(TLML3R, TLML4R, TLML5R)

Thermal power of orthogonal axes reducer (TLML3R, TLML4R, TLML5R)

TLML3R.../环境温度30° Ambient air temperature 30°

规格 size TLML3R..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}] / n_1=1000\text{rpm}$														
		公称传动比 Nominal ratio i_N														
		14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	-1	189 300	196 308	203 314	208 320	215 326	219 331	225 336	230 341	235 347	240 352	245 256	249 360	253 364	257 369	261 373
110	-1	242 385	252 395	260 403	267 410	275 418	282 424	288 431	295 438	302 445	308 451	314 457	319 462	325 467	330 473	335 478
120	-1	303 481	315 493	326 504	334 513	344 522	352 531	361 539	369 547	377 556	385 564	393 571	399 578	406 585	413 591	419 598
130	-	354	368	380	390	402	411	421	431	441	450	459	466	475	482	490
140	-	450	468	484	497	511	524	536	549	561	573	584	594	604	614	623

规格 size TLML3R..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}] / n_1=1200\text{rpm}$														
		公称传动比 Nominal ratio i_N														
		14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	-1	178 325	186 333	193 340	199 346	205 352	210 357	216 363	222 369	227 374	233 380	238 385	242 389	246 393	251 398	255 402
110	-1	228 416	238 427	247 436	255 443	263 451	270 458	277 466	284 473	292 480	298 487	305 493	310 499	316 504	322 510	327 515
120	-1	285 521	298 534	309 545	319 554	329 565	338 573	347 582	356 591	365 600	373 609	381 617	388 624	395 631	402 638	409 645
130	-	333	348	361	372	384	395	405	416	426	436	445	453	462	470	478
140	-	424	443	460	474	489	502	516	529	542	555	567	577	587	598	608

规格 size TLML3R..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}] / n_1=1500\text{rpm}$														
		公称传动比 Nominal ratio i_N														
		14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	-1	163 358	172 367	180 375	186 381	193 388	199 394	205 400	211 406	217 412	222 418	228 423	232 428	237 432	242 437	247 442
110	-1	209 460	221 471	230 481	238 489	247 498	255 505	263 513	270 521	278 528	285 536	292 543	298 549	304 555	310 561	316 567
120	-1	262 575	276 589	288 601	298 611	309 622	319 632	328 642	338 651	348 661	357 670	365 679	373 686	381 694	388 701	396 709
130	-	306	322	336	348	361	372	384	395	406	417	427	436	445	454	463
140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

规格 size TLML3R..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}] / n_1=1800\text{rpm}$														
		公称传动比 Nominal ratio i_N														
		14	16	18	20	22.5	25	28	31.5	35.5	40	45	50	56	63	71
100	-1	150 389	160 399	168 407	175 413	182 421	188 427	195 434	201 440	208 447	214 452	219 458	224 463	229 468	234 473	240 478
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

TLML4R.../环境温度30° Ambient air temperature 30°

规格 size TLML4R..	Number of fan/s	热功率 Thermal rating $P_{th}[\text{kw}] / n_1=1000\text{rpm}$				
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TLML5R.../环境温度30° Ambient air temperature 30°

规格 size	热功率 Thermal rating P_{th} [kw]/n1=1000rpm													
	公称传动比 Nominal ratio i_N													
TLML5R..	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
100	110	112	114	115	116	118	119	120	121	122	123	124	125	126
110	136	138	140	142	144	145	147	148	150	151	153	154	155	156
120	175	177	179	182	184	186	188	190	192	193	195	197	198	199
130	208	211	214	216	219	221	224	226	228	230	232	234	236	238
140	258	262	265	268	272	274	277	280	283	286	288	290	293	295

规格 size	0热功率 Thermal rating P_{th} [kw]/n1=1200rpm													
	公称传动比 Nominal ratio i_N													
TLML5R..	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
100	108	110	111	113	114	116	117	118	119	121	122	123	124	125
110	133	135	137	139	141	143	144	146	147	149	150	152	153	154
120	171	173	176	178	181	183	185	187	189	191	192	194	196	197
130	203	206	209	212	215	217	220	222	225	227	229	231	233	235
140	252	256	260	263	267	270	273	276	279	282	284	287	289	291

规格 size	0热功率 Thermal rating P_{th} [kw]/n1=1500rpm													
	公称传动比 Nominal ratio i_N													
TLML5R..	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
100	105	106	108	110	111	113	114	116	117	118	120	121	122	123
110	129	131	134	136	138	139	141	143	144	146	148	149	150	152
120	165	168	171	174	176	178	180	183	185	187	189	191	192	194
130	197	200	204	207	210	212	215	218	220	223	225	227	228	231
140	242	246	250	254	258	261	264	267	270	273	276	279	281	284

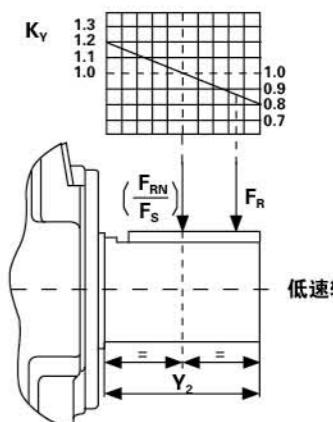
规格 size	0热功率 Thermal rating P_{th} [kw]/n1=1800rpm													
	公称传动比 Nominal ratio i_N													
TLML5R..	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
100	102	104	105	107	109	110	112	113	115	116	118	119	120	121
110	126	128	130	132	135	136	138	140	142	144	145	147	148	149
120	161	164	167	169	172	174	177	179	182	184	186	188	190	191
130	191	195	198	202	205	208	211	213	216	219	221	223	226	228
140	237	242	246	250	254	258	261	265	268	271	274	277	280	282

注意Note: 带风扇的热功率数值指径向风扇。 Thermal rating values(with fan)are based an radial fan option.

带轴向风扇热功率数值必须参考风冷系数见第5页。 For thermal rating with axial fan, please refer to page 5.

7.许用径向力 Permissible radial force许用径向力 F_R 的确定 Confirm of permissible radial force F_R

$$F_R = \frac{F_{RN}}{F_s} \cdot K_Y$$

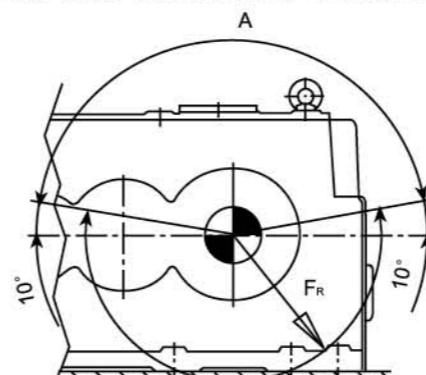
 F_R =实际许用径向力 actual permissible radial force F_{RN} =轴端中点许用额定径向力 = shaft end point allowable rated radial force F_s =使用系数use coefficient K_Y =径向力位置的影响系数Influence coefficient of radial force position**许用径向力参数Permissible radial force parameters**下表说明了当轴向力FA=0时许用额定径向力 F_{RN} Table illustrates when axial force FA=0,permissible rated radial force F_{RN} **低速轴许用额定径向力 F_{RN} 表 ($F_A=0$)**Table of low speed shaft permissible rated radial force $F_{RN}(F_A=0)$

减速器型号 Reducer model	ML2P,ML3P,ML4Pand ML3R
轴位置 Axis position	03,04, 14,23, 14,23

减速器规格 Reducer specification	低速轴轴端中心的 F_{RN} (kN) End of low speed shaft center F_{RN} (kN)		
	≤13	≤22	≤50
100	240	190	150
110	370	330	300
120	430	380	350
130	400	350	325
140	500	440	405

水平实心轴底脚安装减速器的许用径向力方向

Permissible radial force direction of horizontal solid shaft mounting feet reducer



许用径向力方向图 Permissible radial force direction table

要确保减速器安装牢固，以免因外力作用而移动。

Ensure the reducer is installed firmly, In order to avoid moving by external force

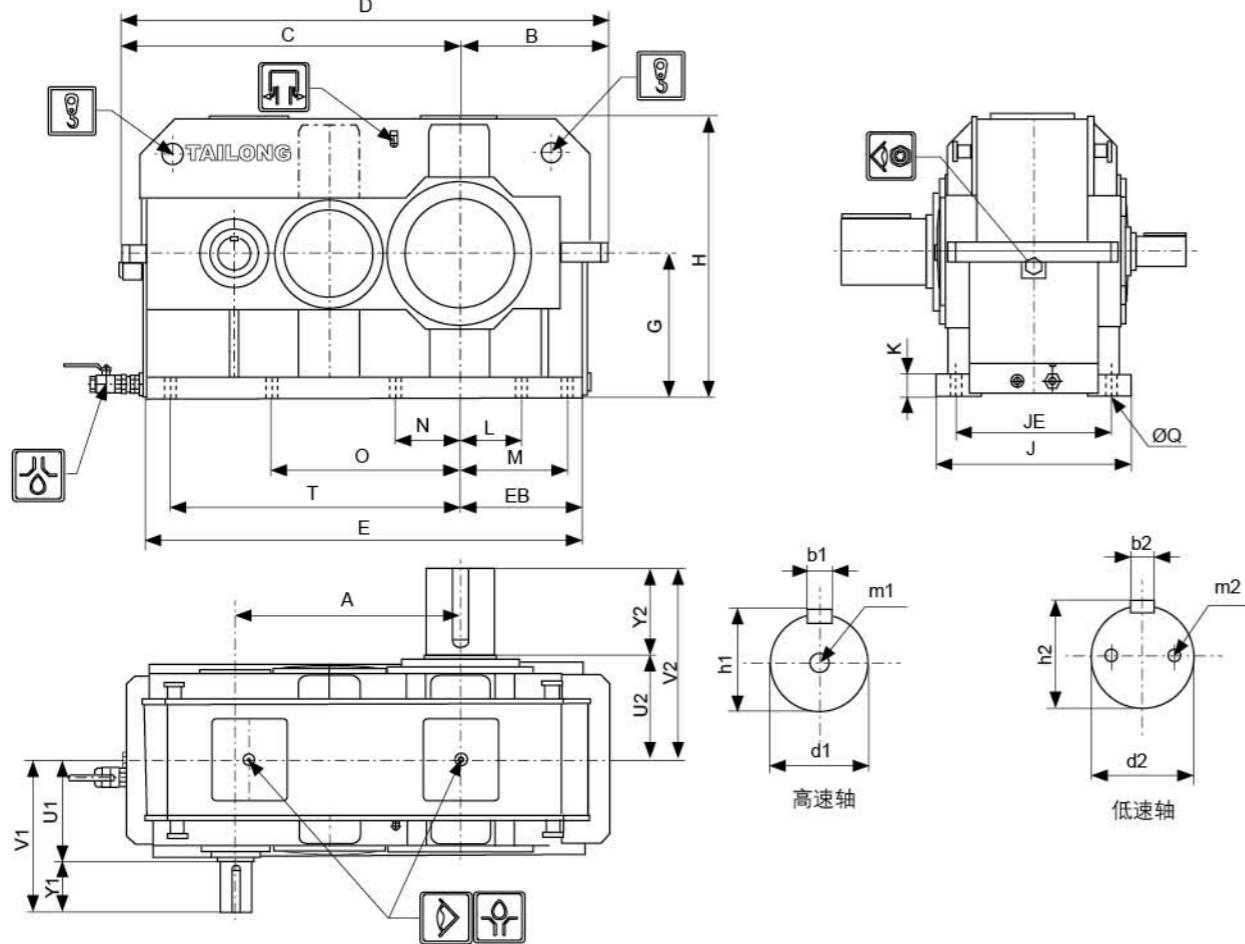
当径向力 F_R 向上时 (见符号A区域) , 请咨询技术研发中心。

When

六、外形安装尺寸图 Outline installation drawing

1、TLML2P..100-140减速机外形及安装尺寸

TLML2P..100-140 outline and installation

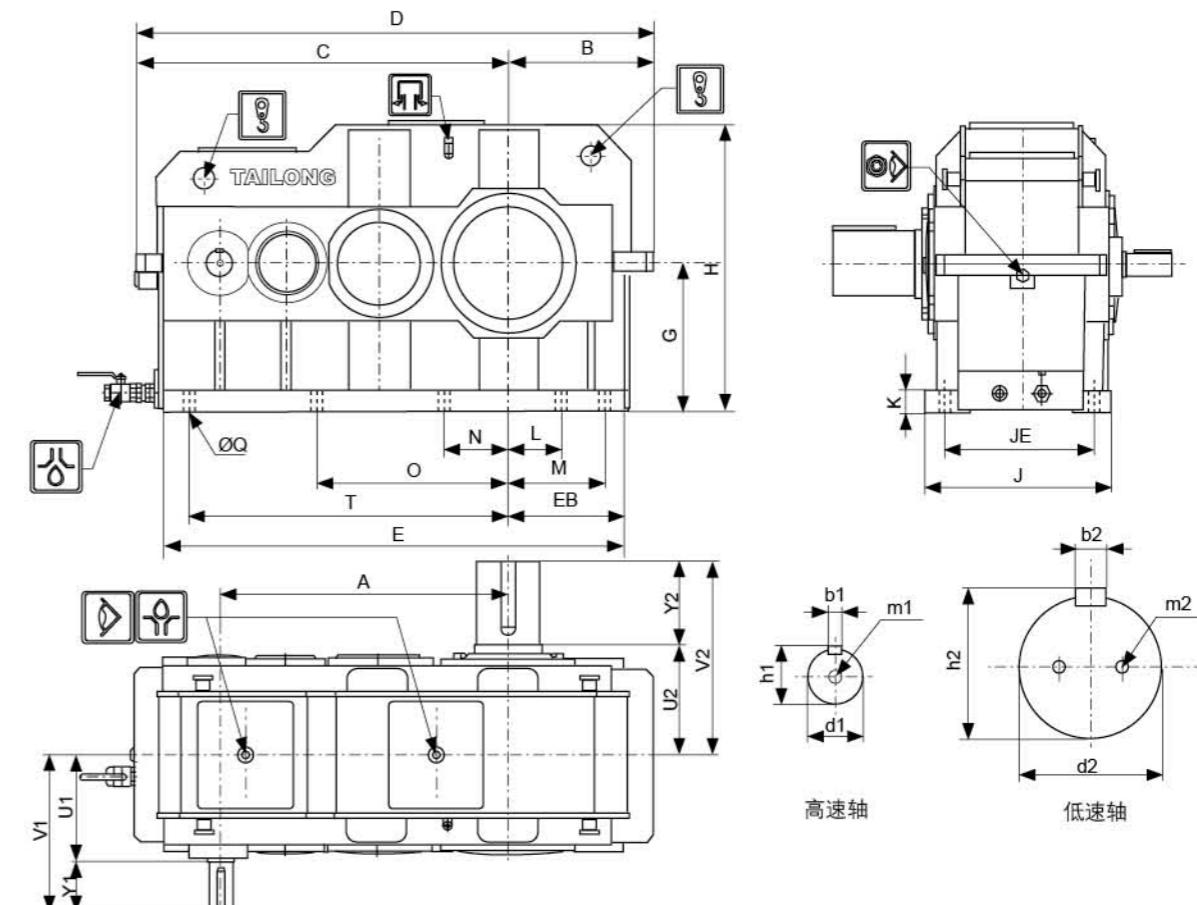


规格 Size	箱体尺寸 Housing dimensions(mm)								底脚安装 Foot mounting(mm)								
	A	B	C	D	E	EB	G	H	J	JE	K	L	M	N	O	T	Q
100	765	505	1155	1660	1460	405	500	975	652	526	72	185	335	225	660	950	42
110	855	565	1280	1845	1650	466	560	1090	710	590	82	240	400	260	750	1100	48
120	960	650	1440	2090	1868	538	630	1225	834	664	92	270	470	280	800	1230	54
130	1080	715	1615	2330	2090	595	710	1370	888	718	102	280	500	330	950	1400	54
140	1210	812	1820	2632	2352	672	800	1525	940	770	112	300	580	380	1050	1580	54

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)						LSS Dimensions 低速轴尺寸(mm)						重量 Weight (kg)	油量 Oil quantity(l)			
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	飞溅润滑 Bath	压力润滑 Pressure		
100	5.6..11.2	350	190	540	120m6	32h9	127	M24	370	280	650	220m6	50h9	231	M20	3100	190	114
	12.5..18		190	540	100m6	28h9	106	M24		280	650	220m6	50h9	231	M20	3100		
110	5.6..11.2	420	225	645	130m6	32h9	137	M24	420	330	750	260m6	56h9	272	M24	4100	265	155
	12.5..18		190	610	110m6	28h9	116	M24		330	750	260m6	56h9	272	M24	4100		
120	5.6..12.5	435	225	660	140m6	36h9	148	M30	450	380	830	300m6	70h9	314	M24	5500	355	190
	14..18		190	625	120m6	32h9	127	M24		380	830	300m6	70h9	314	M24	5500		
130	5.6..12.5	465	270	735	160m6	40h9	169	M30	485	450	935	340m6	80h9	355	M30	7900	510	290
	14..18		225	690	140m6	36h9	148	M30		450	935	340m6	80h9	355	M30	7900		
140	5.6..12.5	495	270	765	170m6	40h9	179	M30	535	450	985	380m6	80h9	395	M30	10400	735	430
	14..18		225	720	150m6	36h9	158	M30		450	985	380m6	80h9	395	M30	10400		

2、TLML3P..100-140减速机外形及安装尺寸

TLML3P..100-140 r outline and installation

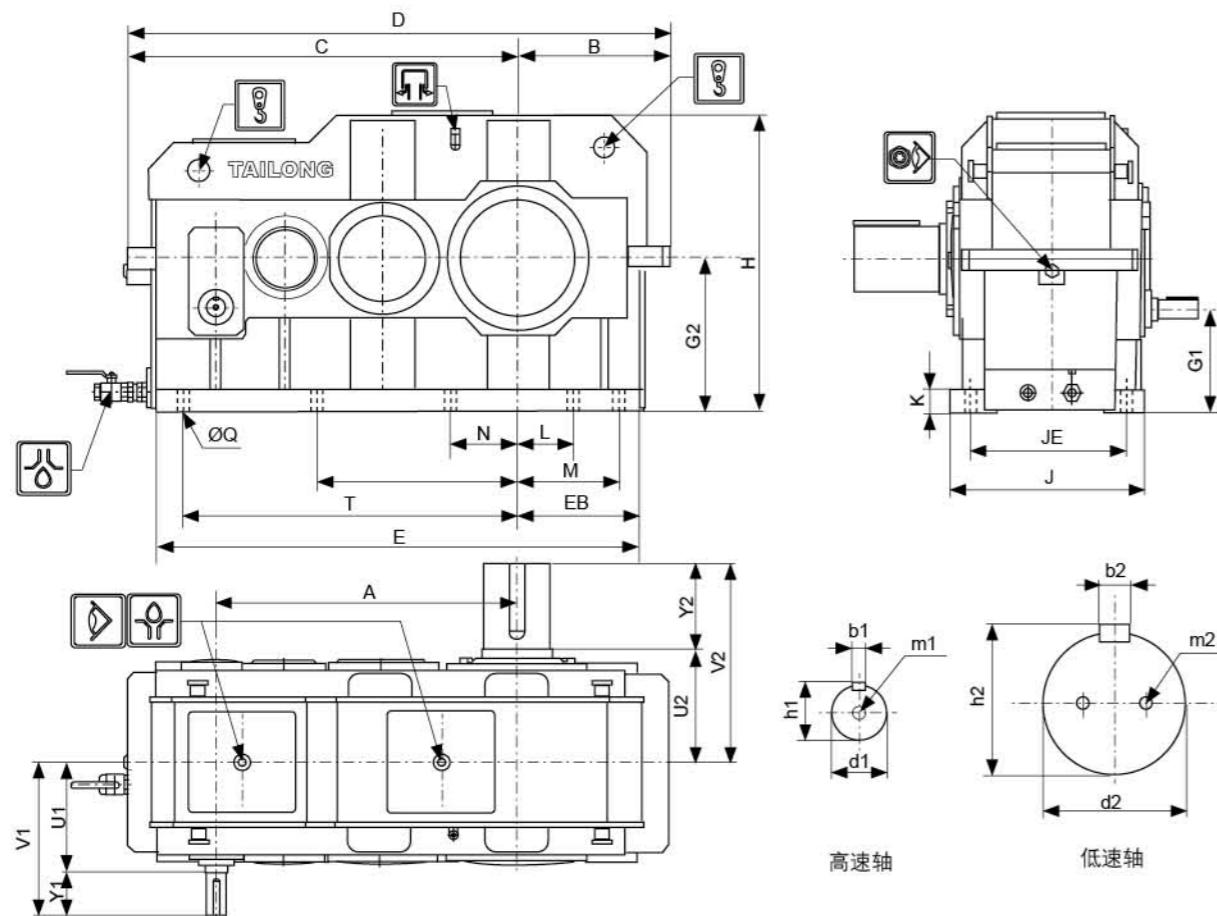


规格 Size	箱体尺寸 Housing dimensions(mm)								底脚安装 Foot mounting(mm)								
	A	B	C	D	E	EB	G	H	J	JE	K	L	M	N	O	T	Q
100	990	505	1285	1790	1590	405	500	975	652	526	72	185	335	225	660	1095	42
110	1105	581	1415	1996	1796	481	560	1090	710	590	82	240	400	260	750	1212	48
120	1240	638	1562	2200	2000	538	630	1225	834	664	92	270	470	280	800	1370	54
130	1395	715	1750	2465	2225	595	710	1370	888	718	102	280	500	330	950	1535	54
140	1565	792	1948	2740	2500	672	800	1525	940	770	112	300	580	380	1050	1728	54

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)						LSS Dimensions 低速轴尺寸(mm)						重量 Weight (kg)	油量 Oil quantity(l)				
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	飞溅润滑 Bath	压力润滑 Pressure			
100	20..40	360	150	510	85m6	22h9	90	M20	370	280	650	220m6	50h9	231	M20	3300	200	120	
	45..56		125	485	75m6	20h9	79.5	M20		330	400	250	200m6	45h9	242	M20	3600	220	130
	63..80		125	485	65m6	18h9	69	M20		350	420	270	220m6	40h9	253	M20	3900	240	140
110	20..40	400	150	550	95m6	25h9	100	M24	420	330	750	260m6	56h9	272	M24	4400	280	165	
	45..50		150	550	85m6	22h9	90	M20		330	360	750	260m6	56h9	272	M24	4400	280	165
	56..80		125	525	75m6	20h9													

3、TLML4P..100-140减速机外形及安装尺寸

TLML4P..100-140 outline and installation

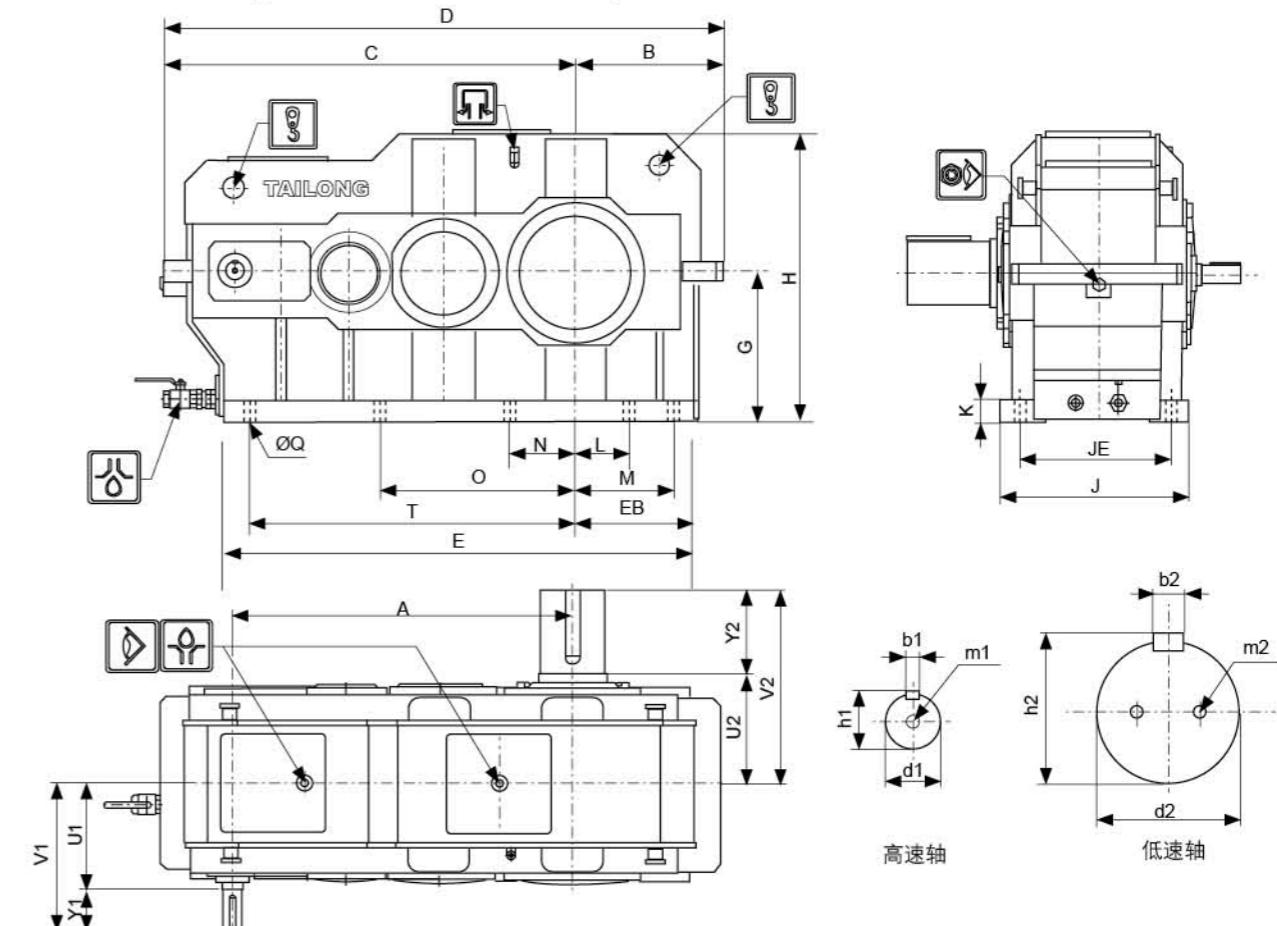


规格 Size	箱体尺寸 Housing dimensions(mm)										底脚安装 Foot mounting(mm)									
	A	B	C	D	E	EB	G1	G2	H	J	JE	K	L	M	N	O	T	Q		
100	990	505	1285	1790	1590	405	340	500	975	652	526	72	185	335	225	660	1095	42		
110	1105	581	1415	1996	1796	481	380	560	1090	710	590	82	240	400	260	750	1212	48		
120	1240	638	1562	2200	2000	538	430	630	1225	834	664	92	270	470	280	800	1370	54		
130	1395	715	1750	2465	2225	595	485	710	1370	888	718	102	280	500	330	950	1535	54		
140	1565	792	1948	2740	2500	672	550	800	1525	940	770	112	300	580	380	1050	1728	54		

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)							LSS Dimensions 低速轴尺寸(mm)							重量 Weight (kg)	油量 Oil quantity(l)	
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	m2*		飞溅润滑 Bath	压力润滑 Pressure
100	71..112	125	485	65m6	18h9	69	M20	370	280	650	220m6	50h9	231	M20	3500	200	120	
	125..180	360	125	485	60m6	18h9	64	M20	420	330	750	260m6	56h9	272	M24	4600	280	
	200..315	95	455	50k6	14h9	53.5	M16	450	380	830	300m6	70h9	314	M24	6250	400		
110	71..112	125	525	75m6	20h9	79.5	M20	485	450	935	340m6	80h9	355	M30	8600	545	165	
	125..180	400	125	525	70m6	20h9	74.5	M20	485	450	935	340m6	80h9	355	M30	8600	545	
	200..315	95	495	55m6	16h9	59	M20	485	450	935	340m6	80h9	355	M30	8600	545		
120	71..112	150	585	80m6	22h9	85	M20	485	450	935	340m6	80h9	355	M30	8600	545	235	
	125..200	435	125	560	75m6	20h9	79.5	M20	485	450	935	340m6	80h9	355	M30	8600	545	
	225..315	125	560	60m6	18h9	64	M20	485	450	935	340m6	80h9	355	M30	8600	545		
130	71..140	150	610	90m6	25h9	95	M24	535	450	985	380m6	80h9	395	M30	11150	775	315	
	160..180	460	150	610	80m6	22h9	85	M20	485	450	935	340m6	80h9	355	M30	8800	620	
	200..315	125	585	70m6	20h9	74.5	M20	485	450	935	340m6	80h9	355	M30	8800	620		
140	71..140	190	700	100m6	28h9	106	M24	535	450	985	380m6	80h9	395	M30	11150	775	460	
	160..200	510	150	660	90m6	25h9	95	M24	485	450	985	380m6	80h9	395	M30	11350	880	
	225..315	125	635	75m6	20h9	79.5	M20	485	450	985	380m6	80h9	395	M30	11350	880		

4、TLML4P..100X-140X(加长总中心距)减速机外形及安装尺寸

TLML4P..100X-140X (extended total center distance)

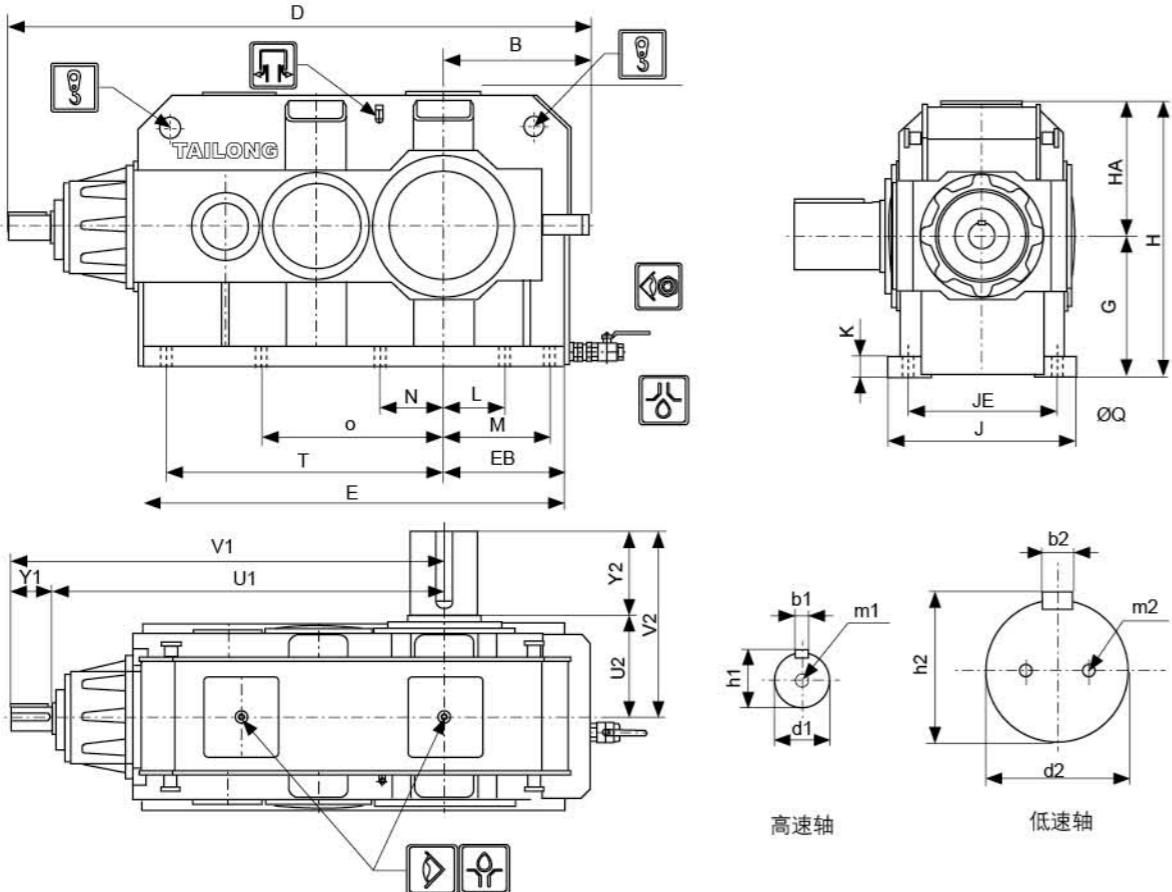


规格 Size	箱体尺寸 Housing dimensions(mm)										底脚安装 Foot mounting(mm)									
	A*	B	C	D	E	EB	G	H	J	JE	K	L	M	N	O	T	Q			
100	1150	505	1395	1900	1590	405	500	975	652	526	72	185	335	225	660	1095	42			
110	1285	581	1547	2128	1750	481	560	1090	710	590	82	240	400	260	750	1212	48			
120	1440	638	1745	2383	2000	538	630	1225	834	664	92	270	470	280	800	1370	54			
130	1620	715	1985	2700	2225	595	710	1370	888	718	102	280	500	330	950	1535	54			
140	1815	792	2198	2990	2500	672	800	1525	940	770	112	300	580	380	1050	1728	54			

<table border="

5、TLML3R..100-140减速机外形及安装尺寸

TLML3R..100-140 outline and installation dimensions

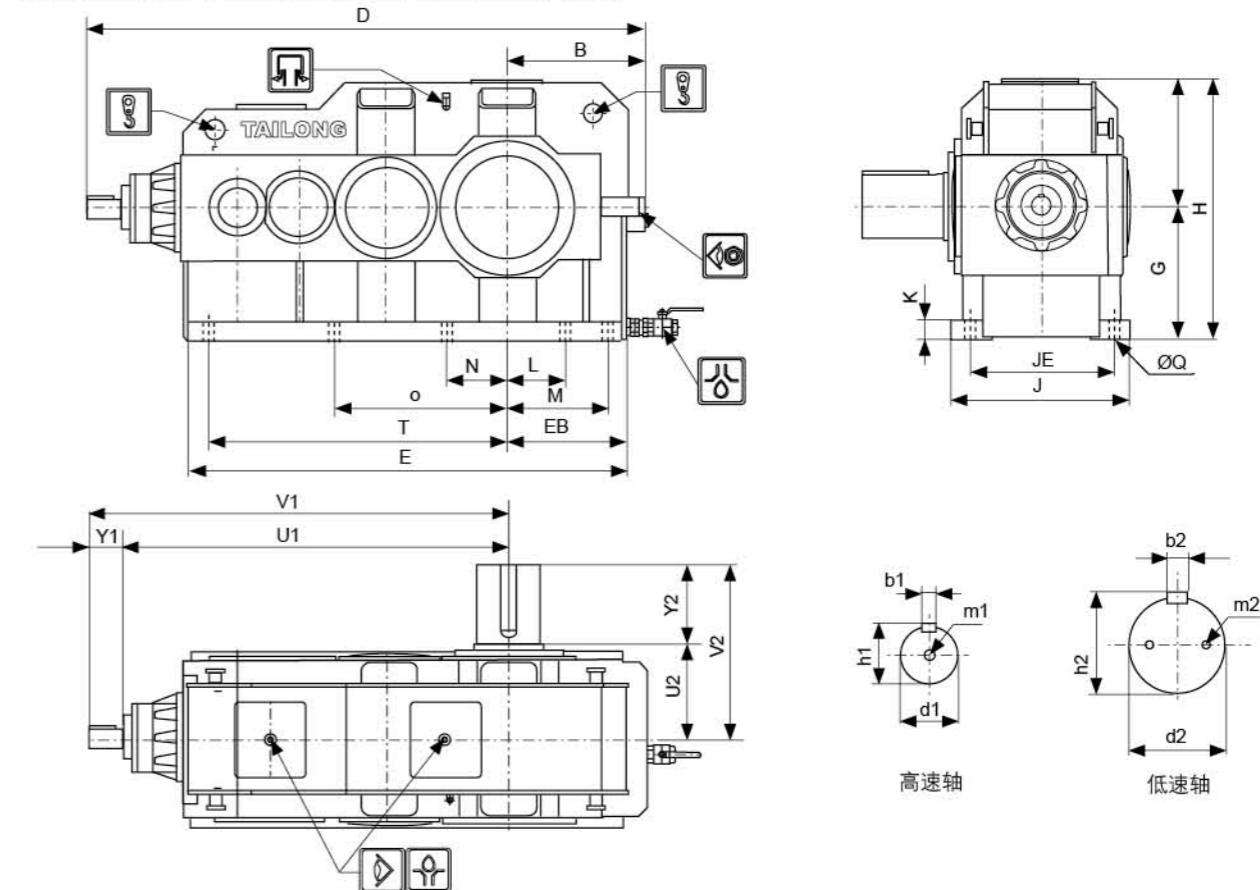


规格 Size	i_N	箱体尺寸Housing dimensions(mm)							底脚安装Foot mounting(mm)							
		B	D	E	EB	G	H	J	JE	K	L	M	N	O	T	Q
100	14..63	505	2075	1457	405	500	975	652	526	72	185	335	225	660	950	42
	71		2035													
110	14..56	581	2321	1648	481	560	1090	710	590	82	240	400	260	750	1100	48
	63..71		2281													
120	14..56	638	2588	1860	538	630	1225	834	664	92	270	470	280	800	1230	54
	63..71		2588													
130	14..56	715	2845	2090	595	710	1370	888	718	102	280	500	330	950	1400	54
	63..71		2810													
140	14..63	792	2117	2332	672	800	1525	940	770	112	300	580	380	1050	1580	54
	71		3082													

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)							LSS Dimensions 低速轴尺寸(mm)							重量 Weight (kg)	油量 Oil quantity(l)	
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	m2*		飞溅润滑 Bath	压力润滑 Pressure
100	14..63	1380	190	1570	100m6	28h9	106	M24	370	280	650	220m6	50h9	231	M20	3300	165	95
	71		150	1530	85m6	22h9	90	M20										
110	14..56	1550	190	1740	110m6	28h9	116	M24	420	330	750	260m6	56h9	272	M24	4400	235	150
	63..71		150	1700	90m6	25h9	95	M24										
120	14..56	1760	190	1950	120m6	32h9	127	M24	450	380	830	300m6	70h9	314	M24	6000	325	180
	63..71		190	1950	100m6	28h9	106	M24										
130	14..56	1905	225	2130	130m6	32h9	137	M24	485	450	935	340m6	80h9	355	M30	8300	485	285
	63..71		190	2095	110m6	28h9	116	M24										
140	14..63	2100	225	2325	140m6	36h9	148	M30	535	450	985	380m6	80h9	395	M30	11000	660	420
	71		190	2290	120m6	32h9	127	M24										

6、TLML4R..100-140减速机外形及安装尺寸

TLML4R..100-140 outline and installation dimensions

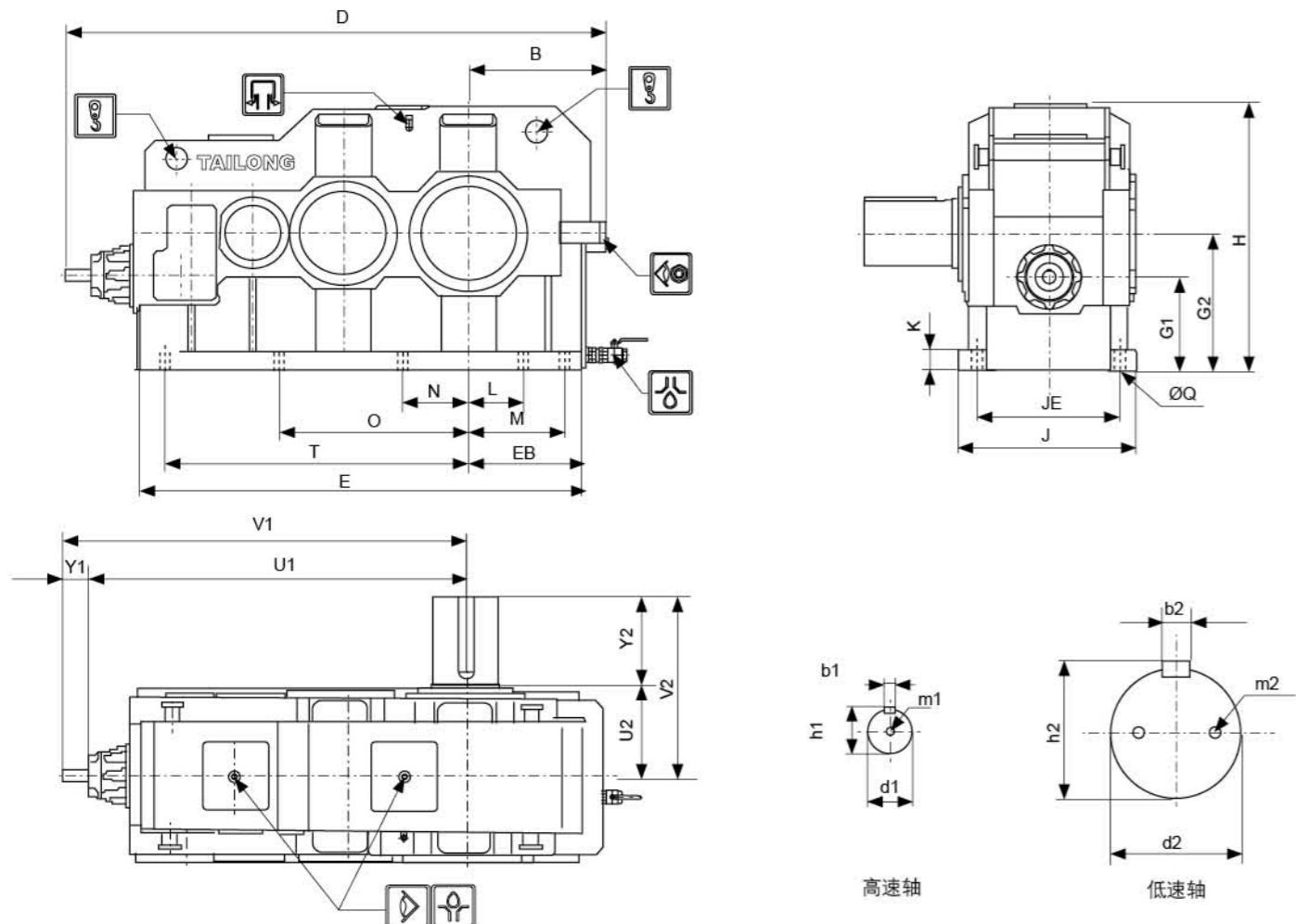


规格 Size	i_N	箱体尺寸Housing dimensions(mm)							底脚安装Foot mounting(mm)							
		B	D	E	EB	G	H	J	JE	K	L	M	N	O	T	Q
100	63..200	505	2079	1590	405	500	975	652	526	72	185	335	225	660	1095	42
	225..280		2079													
110	63..225	581	2331	1800	481	560	1090	710	590	82	240	400	260	750	1212	48
	250..280		2306													
120	63..225	638	2603	2030	538	630	1225	834	664	92	270	470	280	800	1370	54
	250..280		2578													
130	63..225	715	2915	2255	595	710	1370	888	718	102	280	500	330	950	1535	54
	250..280		2875													
140	63..225	792	3242	2582	672	800	1525	940	770	112	300	580	380	1050	1728	54
	250..280		3202													

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)							LSS Dimensions 低速轴尺寸(mm)							重量 Weight (kg)	油量 Oil quantity(l)	
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	m2*		飞溅润滑 Bath	压力润滑<br

7、TLML5R..100-140减速机外形及安装尺寸

TLML5R..100-140 outline and installation dimensions



规格 Size	i_N	箱体尺寸 Housing dimensions(mm)								底脚安装 Foot mounting(mm)									
		B	D	E	EB	G1	G	H	J	JE	K	L	M	N	O	T	Q		
100	280..900	505	1984	1590	405	349	500	975	652	526	72	185	335	225	660	1095	42		
	1000..1250		1959																
110	280..1250	581	2235	1803	481	386	560	1090	710	590	82	240	400	260	750	1212	48		
120	280..1250	638	2439	2008	538	439	630	1225	834	664	92	270	470	280	800	1370	54		
130	280..1250	715	2760.5	2255	595	493	710	1370	888	718	102	280	500	330	950	1535	54		
140	280..1250	792	3040.5	2525	672	565	800	1525	940	770	112	300	580	380	1050	1728	54		

规格 Size	i_N	HSS Dimensions 高速轴尺寸(mm)							LSS Dimensions 低速轴尺寸(mm)							重量 Weight (kg)	油量 Oil quantity(l)	
		U1	Y1	V1	d1	b1	h1	m1	U2	Y2	V2	d2	b2	h2	m2*		飞溅润滑 Bath	压力润滑 Pressure
100	280..900	1384	95	1479	45k6	14h9	48.5	M16	370	280	650	220m6	50h9	231	M20	3570	210	115
	1000..1250		70	1454	35k6	10h9	38	M12										
110	280..900	1559	95	1654	50k6	14h9	53.5	M16	420	330	750	260m6	56h9	272	M24	4720	300	160
	1000..1250		95	1654	40k6	12h9	43	M16										
120	280..1000	1706	95	1801	55m6	16h9	59	M20	450	380	830	300m6	70h9	314	M24	6420	420	230
	1120..1250		95	1801	45k6	14h9	48.5	M16										
130	280..1250	1920.5	125	2045.5	65m6	18h9	69	M20	485	450	935	340m6	80h9	355	M30	8750	570	310
140	280..1250	2123.5	125	2248.5	70m6	20h9	74.5	M20	535	450	985	380m6	80h9	395	M30	11360	795	455

七、可提供的附件 Available annex

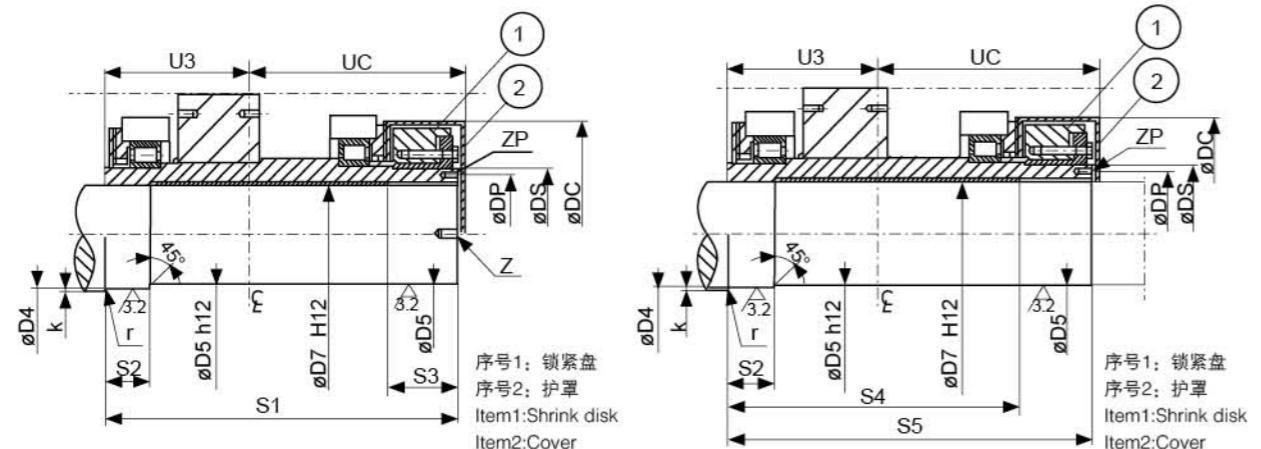
根据不同的用户使用要求，可提供以下附件，请与我公司联系。

According to different user requirements, we can provide following accessories. Please contact us.

名称Name	说明Explain
水冷却内循环系统 Cooling water circulation system	冷却盘管, 进出水接头, 球阀 cooling coil ,water inlet and outlet joint, ball valve
轴端泵压力润滑系统 Shaft end pump pressure lubrication system	油泵, 过滤器, 喷淋管, 接头, 目视进油窗 Oil pump, filter, spraying pipe, fittings, visual into the oil window
集中润滑的连接系统 Connection system of centralized lubrication	接头, 球阀, 目视进油窗, 喷淋管 Joint, ball valve, visual into the oil window, a spray pipe
低温条件下的油加热系统 Oil heating system under low temperature	电加热器, 油温传感器, 温度显示器 electric heater, temperature sensor, temperature display
冷却风扇 Cooling fan	尺寸见p34,p35页 Size See page 34,35

八、空心轴连接尺寸 Hollow shaft connection size

空心轴锁紧盘尺寸、锁紧盘在从动机的对面 Hollow shaft-shrink disk connection



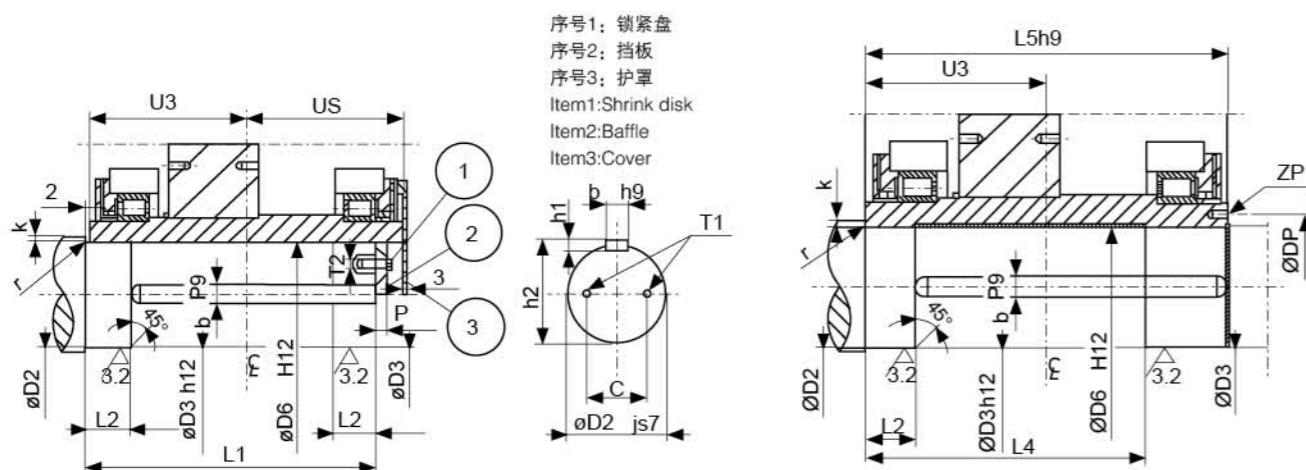
规格 Size	尺寸Dimensions(mm)																			
	收缩盘Shrink disk			从动机轴端Shaft end of driven machine						空心轴 Hollow shaft			护罩cover							
	尺寸标准 Size standard	øDS mm	Ma* (Nm)	øD4 最小 min	øD5 标准 standard	øD7 最小 min	S1	S2	S3	S4	S5	k 最小 min	r 最大 max	U3	øDP 6x60°	øDC	UC			
100	300/d=300	300	840	230	250js7/H8	229	249g6/H7	251	872	125	140	732	872	8	6	362	275	M12x24	513	540
110	360/d=360	360	840	240	300js7/H8	239	299g6/H7	301	975	150	167	808	975	8	6	400	330	M16x30	620	610
120	390/d=390	390	1250	270	310js7/H8	269	309g6/H7	311	1044	160	175	869	1044	8	6	435	350	M16x30	680	644
130	420/d=420	420	1250	280	330js7/H8	279	329g6/H7	331	1123	165	196	927	1123	8	6	465	375	M20x40	700	693
140	请联系泰隆技术研发中心Please consult TAILONG-R&D center																			

*) 收缩盘螺钉的拧紧力矩 Tightening torque of shrink disk screws

Z) 按用户标准对推荐组件 Threaded holes according to customers

ZP) 对拆卸工具 For disassembly tools

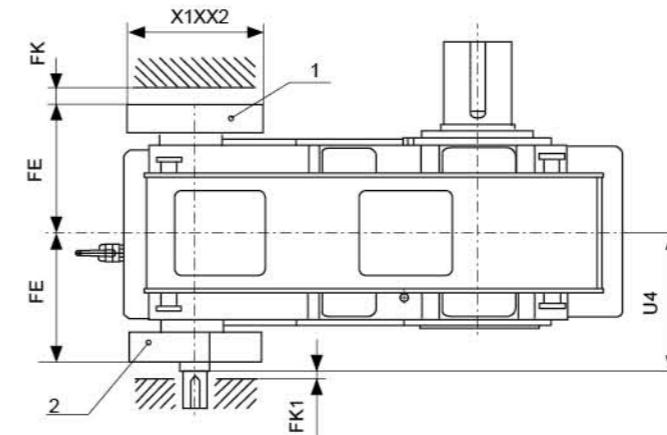
空轴键连接尺寸 Hollow shaft-key connection



规格 Size	尺寸Dimensions(mm)																						
	øD2 最小 min	øD3 标准 standard	øD6 mm	L1	L2	L4	L5	P	T1	c	T2	U3	US	ZP 6x60°	øDP	螺钉Screw 规格Size	个 Pcs	b	h1	h2	k* 最小 min	r 最大 max	
100	230	240js7/H8	239js7/H8	241	657	120	535	724	30	M24x45	144	M30	362	362	M12x24	270	M24x70	2	56	32	252	8	6
110	240	280js7/H8	279js7/H8	281	732	140	590	800	32	M24x70	168	M30	400	400	M16x30	320	M24x100	2	63	32	292	8	6
120	280	300js7/H8	299js7/H8	301	801	145	654	870	32	M24x70	180	M30	435	435	M16x30	350	M24x100	2	70	36	314	8	6
130	300	320js7/H8	319js7/H8	321	852	150	700	930	36	M30x80	192	M36	465	465	M20x40	380	M30x110	2	70	36	334	8	6
140	340	370js7/H8	369js7/H8	371	938	180	756	1012	36	M30x80	220	M36	506	506	M20x40	425	M30x110	2	80	40	385	10	8

九、冷却风扇(径向) Cooling fan (radial)

平行轴 parallel shaft reducer

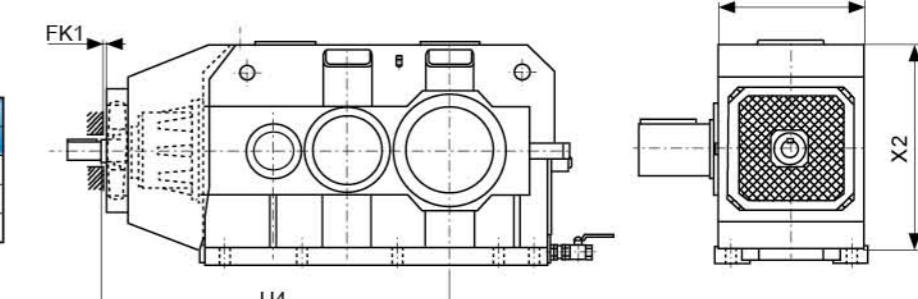


规格Size ML2P..	尺寸Dimensions(mm)						
	Fan*	U4	X1	X2	FE	FKmin	FK1min
100	ø400	490	550	550	460	65	20
110	ø530	560	680	680	520	65	20
120	ø530	575	680	680	540	65	20

规格Size ML3P..	尺寸Dimensions(mm)						
	Fan*	U4	X1	X2	FE	FKmin	FK1min
100	ø400	500	550	550	470	65	20
110	ø530	540	680	680	510	65	20
120	ø530	575	680	680	545	65	20

直交轴 Bevel Helical Gear Units

规格Size ML3R..	尺寸Dimensions(mm)			
	Fan*	U4	X1	X2
100	ø400	1520	718	890
110	ø530	1690	758	1000
120	ø530	1900	805	1140



规格Size ML4R..	尺寸Dimensions(mm)					
	Fan*	U4	X1	X2	FK1min	
100	ø400	1585	718	800	20	
110	ø530	1735	758	900	20	
120	ø530	1955	805	1020	20	

