CYCLO REDUCER

擺線針減速機

2019

SHUNDA TRANSMISSION

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B/JXJ 系列摆线针轮减速机
B/JXJ SERIES CYCLOID PIN WHEEL REDUCER

品 质 创 造 价 值

产品简介 Introduction

星光B/JXJ 系列摆线针轮减速机采用K-H-V少齿差行星式传动原理及摆线针齿啮合的新型传动结构。产品通过ISO9001质量体系认证，符合标准JB/T2982-94。

主要有以下突出特点：

1. 传动比大

单级传动最大达87，双级传动最大达7569

2. 传动效率高

单级传动效率0.8~0.85

3. 结构紧凑、体积小

采用行星传动原理，输入轴与输出轴在同一轴线上，与电动机直联呈一体的独特之处。

4. 运转平稳、噪声低

传动针齿多齿啮合，重叠系数大，且具有机体平衡的原理，使振动和噪声限制在最小的程度内。

5. 故障少、寿命长

主要传动件采用轴承钢，经淬火处理获得高硬度，耐磨性能好，且传动件之间是滚动摩擦。

6. 过载能力强、耐冲击、惯性力矩小

转动惯性小，适用于启动频繁和正反转负载场合。

B/JXJ系列摆线针轮减速机广泛应用于陶瓷、食品、制药、塑料、轻工、纺织、矿冶、石化、起重运输、印染等领域中的驱动和减速装置。

B/JXJ series cycloid pin wheel reducer the principle of K-H-V planetary drive with small teath difference and the new transmission structure of cyeloid gear meshing with pin wheel. The product through the ISO9001 quality system authentication, conforms to the standard of JB/T2982-94.
Have the following outstanding advantages:

1. Big ratio:

the maximum ratio of single stage reducer is 87,the double-stage reducer is 7569.

2. The efficiency value :

Single reducer is 0.80~0.85.

3.Compact structure, small volume:

Planeary, not only input shaft and output axis in the same axis, and motor is a direct coupling and unique.

4. Smooth running, low noise:

Transmission gear tooth needle more engagement, overlapping factor is big, The principle of balance makes the vibration and noise in the smallest range.

5. Low malfunction, long service life:

The main transmission parts using bearing steel, High hardness after quenching process, wear-resisting performance is good, and drive a rolling friction between is, the less of the fault, and long service life.

6. Overload ability strong, impact resistance, the moment of inertia small:

Due to small rotational inertia, apply to start frequent and positive &negative occasion.

B/JXJ series cycloid reducer machine widely used in ceramic, food, pharmaceutical, plastic, light industry and textile, mining and metallurgy, petrochemical, lifting transportation, in the field of printing and dyeing drivers' device.

结构原理 Structural principle

摆线针轮减速机根据K－H－V少齿差行星传动原理设计而成的，行星轮（摆线轮）的轮齿为摆线齿，太阳轮(针轮)为针齿，两者组成了摆线针轮啮合副，针轮齿数与摆线轮齿数的差值为1。在传动过程中转臂将输入运动传递给摆线轮。由于固定针轮的作用，摆线轮产生与输入运动相反的低速自传运动，再通过输出机构输出。

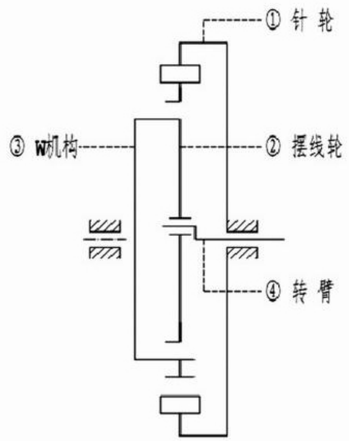
输入轴上装有一个错位180° 的双偏心套，在偏心套上装有两个转臂滚柱轴承,形成H结构，两个摆线轮的中心孔即为偏心套转臂轴承的滚道，并由摆线轮与针齿轮上一组环形排列的针齿轮相啮合，以组成少齿差内啮合减速机构，（为了减少磨擦，在速比小的减速机中，针齿上带有针齿套）。

当输入轴带动偏心套转动一周时，由于摆线轮上齿廓曲线的特点及其受针齿轮上针齿限制之故,摆线轮的运动成为即有公转又有自转的平面运动,在输入轴正转一周时,偏心套亦转动一周,摆线轮于相反方向上转过一个齿差从而得到减速，再借助W输出机构，将摆线轮的低速自转运动通过销轴传递给输出轴，从而获得较低的输出转速。

The unique cycloid pin wheel reducer is based on an ingeniously simple rinciple of K-H-V planetary drive with small teeth defference. Cycloid working unit is composed of planet gear (cycloid gear) and Sun gear (pin wheel). The gear ratio between pin wheel and cycloid gear is one. Input unit consists of roller bearings on a double eccentric cam. When driving, input drive is transmitted to cycloid gear through roller.

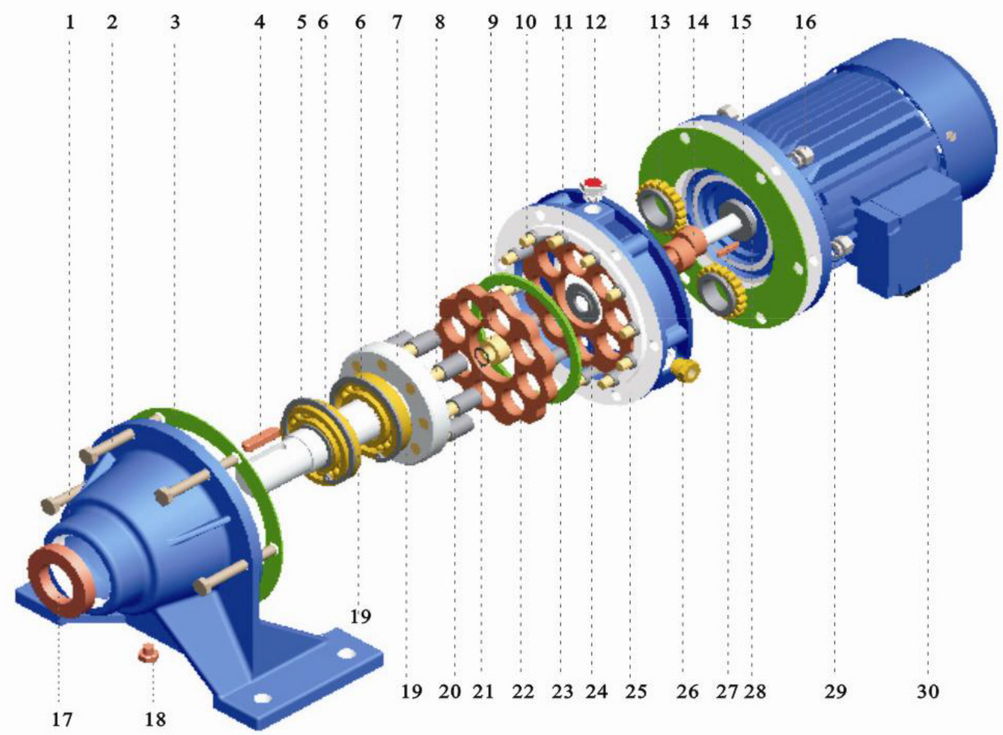
Input shaft is equipped with 180° dislocation of the double eccentric sets, eccentric set in with two turn arm roller bearing, form H structure, two cycloid gear in the center hole that is set for eccentric turn of the bearing arms rolling way, and the cycloid gear and needle gear on one group of circular arrays of needle gear meshed, fewer tooth difference of internal meshing deceleration institutions, (in order to reduce friction, in small of the deceleration machine speed ratio, the needle on teeth with needle tooth set).

When the input shaft drive eccentric set of turning a week, because the cycloid gear tooth profile curve of characteristics and needle gear teeth are the reason needle limit, the movement of cycloid gear that have become the revolution and the plane of rotation movement, in the input shaft are turning a week, eccentric set a week also turn, cycloid gear in the opposite direction turned on a tooth difference and get a slow down, again with W output institutions, will cycloid gear of low speed rotation movement through the pin shaft passed to the output shaft and get a low output speed.



部分摆线减速图片

零件爆炸图及名称 Exploded view & Name of parts



序号 No.	名称	Description	数量 Quantity	序号 No.	名称	Description	数量 Quantity
1	机座	Base	1	16	螺母	Nut	6
2	六角头螺栓	Hexagon bolts	6	17	油封	Oid Seal	1
3	机座密封垫	Base gasket	6	18	六角头螺栓	Hexagon bolts	1
4	平键	Flat key	1	19	轴承	Bearing	2
5	轴用挡圈	Circlip	1	20	销套	Roller	依机座号定 According to the Base No.
6	孔用挡圈	Circlip	2	21	轴用挡圈	Circlip	1
7	输出轴	Output shaft	1	22	摆线轮	Cycloid gear	2
8	销轴	Pin	依机座号定 According to the Base No.	23	间隔环	Partition ring	1
9	轴承	Bearing	1	24	偏心处轴套	Eccentric shaft knots	1
10	针齿销	Gear Pin	依速比定 According to the ratio	25	针齿壳	Pin wheel housing	1
11	针齿套	Gear roller	依速比定 According to the ratio	26	油镜	Oil level plug	1
12	通气油塞	Oil breather	1	27	平键	Motor spindle key	1
13	偏心轴承	Eccentric bearing	2	28	直联电机轴轴套	In line motor shaft knots	1
14	偏心套	Eccentric knots	1	29	弹垫	Elastic ring	1
15	电机密封垫	Motor gasket	1	30	专用直联电机	Inline motor	1

机型号对照 Comparison of base no.s

单机摆线
Single stage cycloid reducer

天津 X系列 Tianjin X series		1		2	3	4	5	6	7	8	9	10	11
上海 B系列 ShanghaiB series		09		10	11	12	13	14		15	16	17	18
星光 B系列 Xingguang B series				0	1	2	3	4		5	6	7	8
机械部 B系列 Mechanical department B series				12	15	18	22	27		33	39	45	55
星光 JXJ系列 Xingguang JXJ series				0	1	2	3	4		5	6	7	8
WB微摆系列 Miniature cycloid WB series	WB85		WB100	WB120	WB150								

双级摆线
Double-stage cycloidal reducer

天津X系列 Tianjin X series			31	32	42	53	63	64	74	84	85	95	106
上海 B系列 Shanghai B series			1109	110	120	131	141	142		152	153	163	174
星光 B系列 Xingguang B series				10	20	31	41	42		52	53	63	74
机械部 B系列 Mechanical department B series				1512	1812	2215	2715	2718		3318	3322	3922	4527
星光 JXJ系列 Xingguang JXJ series				10	20	31	41	42		52	53	63	74
WB微摆系列 Miniature cycloid WB series	WB1065	WB1285		WB1510									

说明: 不同标准的相应机型号，其性能指标基本相同，在外形、安装和联接尺上略有不同；用户在选用我司B系列与JXJ系列摆线针轮减速机时可先咨询技术部门.

Notes: Different Base NO., similar performance. But there is a little difference on outline size.mounting size and connecting size. It is recommended to slelct our B and JXJ series cycloidal speed reducer.

型号表示方法 Model said method

减速机型号由减速机型号规格、 电机代号、电机功率、电机极数、传动比、安装位置形式、附加接线盒等组成。

Slow maxhine from slowdown maxhine specifications, motor code, the motor power, motor extreme number, transmission ratio, installation position form, additional junction box etc.

B – W – E – D – 10 – 121 – 80B5 – 0.75 – 4P – D1 – 0°

系列代号 Series code

B	B系列 B series
JXJ	JXJ系列 JXJ series
XJ	XJ不带电机系列 XJ withort motor series

安装结构 Series code

W	卧式地脚安装 JXJ/XJ系列省略 The foot type horizontal installation JXJ/XJ SERIES Not marked
L	立式法兰安装 Flange vertical installation

级数 Series

单级 Single reducer	省略 Not marked
双级 Double-stageReducer	E

动力源配置类型 Power supply configuration types

D、Y、V、J、B、Z

规格号 gauge number

单级 Single reducer	1、2、3、4、5、6
双级 Double-stage Reducer	10、20、21、31、41、42、52、53、63

传动比 transmission ratio

电机机座号 Motor base number

配电机时不标注 Distribution unit not marked

电机功率 motor power

未标注时为不配电机 Not when mark for not worthy motor

电机极数 motor extreme number

2、4、6、8

4极省略 Not mark for 4 pole motor default

安装位置代号 Installation position code

B	B3、B5、B6、B7、B8、B9
V	V1、V3、V5、V6
	B3、B5省略 B3、B5 Not marked

线盒位置 Fuse position

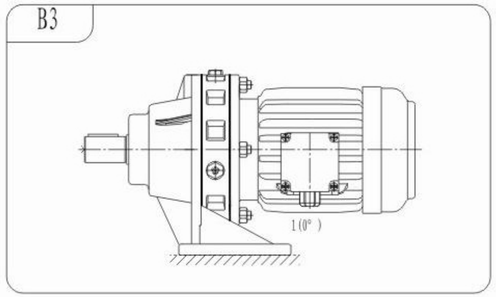
0° 、90° 、180°

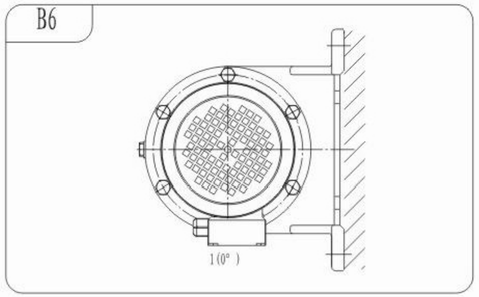
0° 为正常位置不标注 0° for normal position not marked

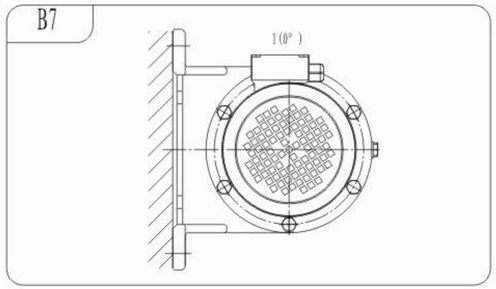
注： 轴输入时，电机相关表示框全部省略

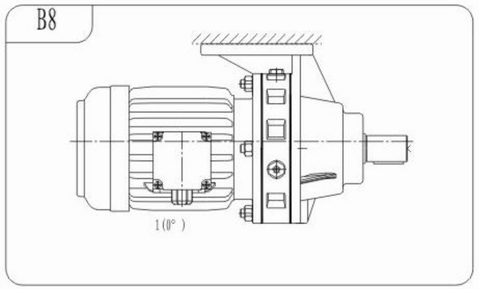
Note: input shaft, the motor related said box all omitted

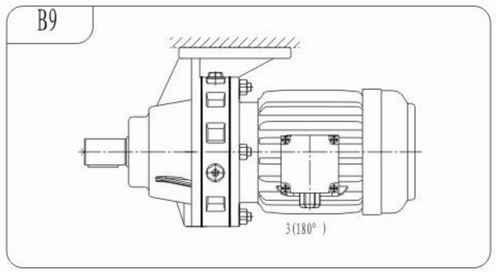
安装型式及代号 Mounting position & Code

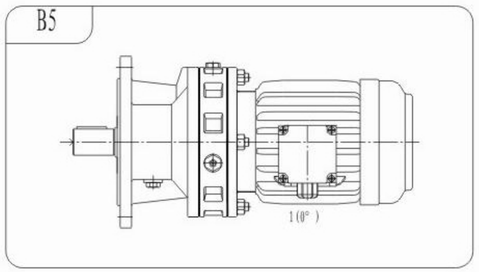


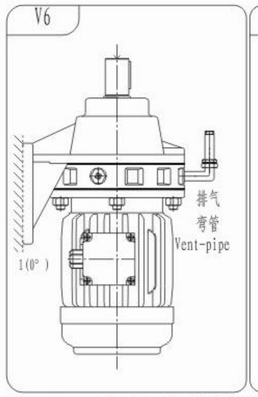


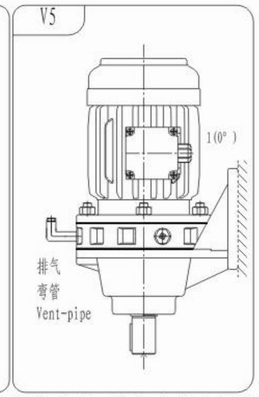


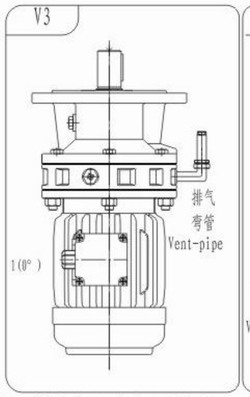


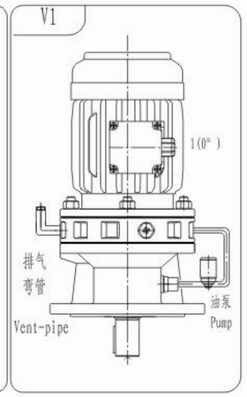












注：1、用户采用特殊结构安装形式，请与我技术部联系，并在合同中加以说明。
2、V1结构安装形式时，仅4#、5#、6#摆线减速机采用油泵循环润滑。
Notes:If plesae contact with our technology department and specity details in contract.

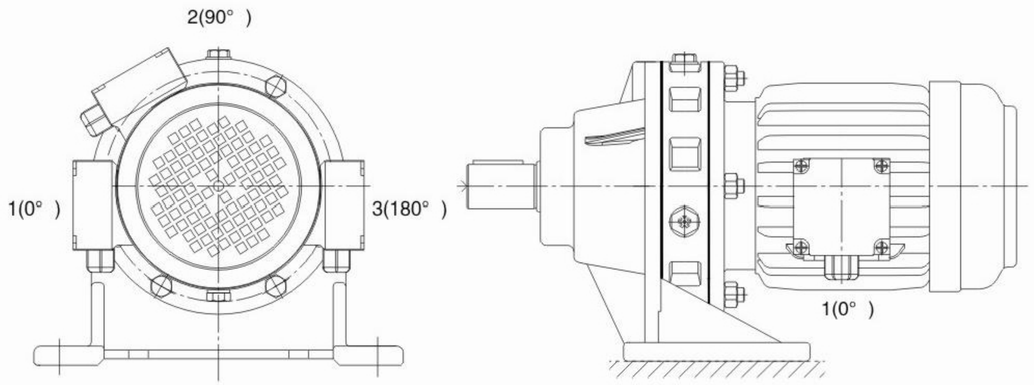
常用电动机类型代号 Power source classification

D	专用电机	D	Special cycloidal speed reducer motor
Y	Y2系列普通电机	Y	Y2 Series ordinary motor
V	YVF系列变频调速电机	V	YVF Series variable frequency adusting speed motor
J	YEJ系列电磁制动电机	J	YEJ Series electromagnetic brake motor
B	YB系列防爆电机	B	YB Series explosion proof motor
Z	直流电机	Z	DC motor

注：
1. 除专用电机外，其余动力源配置时，需用连接法兰联接
2. 如需单向电机、船用电机、多速电机、伺服电机、NEMA系列电机等电机，请向技术部门垂询

Notes: 1. Except special cycloidal motor when other power sources are equipped with,coupling flange of motor is requested.
2. If require single phase motor,motor for vessel,multi–speed motor,servomotor and NEMA motor,please consult with technology department.

电机接线盒位置（从电机风扇罩向输出端看）
Motor thermal box position (viewed output shaft from fan cowl of motor)



1(0°)为正常位置
1(0°)means the standard position

选型指南 Guide for selection

A.选型注意事项

1.根据负载转矩、传动比、输出转速确定所需的减速机型号、电机规格；

2.根据使用情况在安装形式图中确定安装形式及出轴方向；

3.订货时，请尽量选择本样本内的标准产品，并按规范的型号表示方法进行书写；用户如有特殊要求，请在合同上详细说明并与本公司协商.

B.安装与使用注意事项

1.减速机须安装在平整坚固的底座上，底脚螺栓必须紧固以防震松和产生非正常震动；

2.安装时应调整原动机、减速机与工作机各联接轴伸，以保证同轴度；本减速机适合于24小时连续工作，额定输入转速一般应小于1500r/min，通过三相电动机换接任意二根相线，可以正向或反向运转；

3.本减速机无自锁作用，如用于升降装置等危险场合时，应选用制动电机或输入端加配制动装置

4.联轴器、齿轮、链轮或皮带轮等联接件与减速机连接时，不允许用重锤敲击，推荐利用轴伸端螺孔通过压板用螺栓将联接件压入，并使其贴紧轴肩

5.加载试车前，应空载运转半小时左右，确认空载无故障、无异常冲击时，方可加载运行；

6.加载试车后，应注意观察减速机的温升、密封、噪音、振动等是否正常；运转两小时后、检查油池温升及最高油温，减速机允许最大温升为60° C、但最高油温不能超过100° C，超温时应停机检查。

C.维护注意事项

1.减速机的环境温度为-10℃~+40℃,海拔高度1000米以下；当使用特殊环境（如温度过高或是过低、通风不好等）时，应适当调整使用系数或咨询我公司技术部门；

2.减速器应装在有遮篷的交通工具上，运输运输途中应避免剧烈的碰撞和抛掷；发现包装箱损坏时要仔细检查，确实末损坏本机方可投入使用；

3.存放或停用了4-6月的减速机，如果油封和机座之间没有润滑剂，建议更换油封，因油封橡胶老化粘于轴或失去弹性而导致性能下降；

4.应定期用油量指示器检查油量、使其在正确的范围内；润滑油不足可能导致摆线轮快速磨损和效率降低.

A.Lectotype attention items

1.According to the load torque and transmission ratio, output speed for sure of the deceleration machine number, motor specifications;

2.Based on the using condition in the installation in the graph installation form to determine the form and the axis

3.When ordering, please try to choose this sample in the standard products, and according to the standard model said methods for writing; If users have special requirements, please in detail on the contract and the company to negotiate.

B.Installation and matters need attention

1.Should be installed on a flat reducer strong base, the bottom bolts must tighten shockproof foot to loose and produce abnormal vibration;

2. When installation should be adjusted prime mover, deceleration machine and work out the connection machine shaft, in order to ensure the coaxial tolerance; This deceleration machine suitable for 24 hours of continuous work, generally rated input speed should be less than 1500 r/min, through the three-phase motor pick any change in the two lines, can be positive or reverse operation;

3.The speed reducer no self locked functions, such as lifting devices used in danger such as occasion, should choose brake motor or input and preparation .

4.The gear, the coupling dynamic device such as a sprocket or pulley and reducer connection link, allowed to use heavy hammer, recommend using the shaft screw holes through the linking piece out with bolts will pressed into the connection pieces, and make it into shaft shoulder.

5.Before loading test, no-load running should be half an hour or so, make sure there is no abnormal impact, no-load trouble-free check loading operation;

6.After loading test, we should pay attention to observe the rise of temperature of the reducer, sealing, noise, vibration, etc is normal; Two hours after the operation, check the oil pool temperature rise and the highest oil temperature, speed reducer allow maximum temperature 60 ° C, but for the highest oil temperature should not exceed 100 ° C, super temperature should stop check

C. Maintenance matters needing attention

1. The speed reducer environment temperature-10 ℃ ~ + 40 ℃, altitude 1000 m below;

2. When using the special environment (such as the temperature too high or too low, and ventilated bad) when, should adjust the use coefficient or consulting I technology department; Reducer shall be supplied in a canopy of traffic tool, the transportation transit should avoid violent collisions and throwing; Found to check carefully damaged packing cases, really damage the unit at the end of it be put into use;

3.Deposit or off four to six months of the deceleration machine, if oil seal and between base without lubricant, recommend replacing oil seal, because oil seal rubber aging sticky on a shaft or lose flexibility and cause performance down;

4.Should be regularly oil indicator check the oil, make it in the right range; Oil shortage could lead to cycloid gear rapid wear and low efficiency.

使用系数K K-Service factor

原动机种类 Kind of prime mover	工作条件 Daily operating time	使用系数载荷性质等级 Load grade I 稳定 Stable	II 中等冲击 Medium	III 重冲击 Heavy
电动机Motor	断续工作3小时/天 Intermitent 3 hours /day	0.8	1	1.35
	连续8~10小时/天 Continuous 8-10 hours/day	1.0	1.2	1.5
	24小时/天 24hours/day	1.2	1.35	1.6

注：1.最大瞬间载荷或启动载荷不超过额定载荷的160%；

2.若运转中常有短暂间断，则可选用比标准型更小一号的机型，这时请垂询我公司技术部门。

3.若运转中需要频繁启动或有重载荷冲击，可能要求特殊加固或者其它措施，这时请向我公司技术部门咨询。

Notes: 1. Maximum instantaneous load or starting load should not be more than 160% of nominal load.

2. If there is frequent short intermittence in working, it is recommended to select one size smaller than standard one, for the moment please consult with our technical department.

3. If there is frequent frequent start or heavy load, it may take special step to strengthen, for the moment please consult with our technical department.

连接系数 CF Connecting coefficient CF

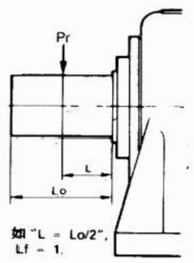
连接方法	Connecting method	Cf
链条	Chain sprocket	1
齿轮	Gear	1.25
V型皮带轮	V-belt wheel	1.5

冲击系数 FS Shock coefficient FS

冲击程度	Shock	Fs
无冲击	Non-shock	1
轻冲击	Light shock	1~1.2
重冲击	Heavy shock	1.4~1.6

输出轴径向力位置系数Lf Coefficient for radial force on output shaft

径向力位置 Radial force position L（mm）	机 型 号 Base No.										
	B09	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9
5	0.847	0.853									
10	0.924	0.912	0.810								
15	1.000	0.971	0.862	0.825							
20	1.075	1.029	0.915	0.867	0.863						
25	1.151	1.088	0.968	0.910	0.897	0.848					
30	1.227	1.147	1.021	0.953	0.932	0.877	0.848				
35		1.206	1.074	1.038	0.966	0.906	0.903	0.842			
40			1.127	1.081	1.000	0.936	0.812	0.859	0.812	0.816	
45			1.180	1.124	1.034	0.965	0.826	0.876	0.826	0.827	0.813
50			1.230	1.210	1.068	0.994	0.841	0.892	0.841	0.838	0.820
60				1.29	1.136	1.053	1.000	0.925	0.870	0.860	0.836
70					1.205	1.111	1.039	0.959	0.898	0.881	0.852
80					1.273	1.170	1.077	0.992	0.928	0.903	0.867
90						1.228	1.116	1.025	0.957	0.924	0.887
100						1.287	1.154	1.058	0.986	0.946	0.883
110							1.193	1.091	1.014	0.968	0.898
120							1.232	1.124	1.043	0.989	0.914
130								1.158	1.072	1.011	0.930
140								1.191	1.101	1.032	0.945
150								1.224	1.130	1.054	0.961
160								1.257	1.159	1.076	0.977
170									1.188	1.097	0.992
180									1.217	1.119	1.023
190										1.140	1.039
200										1.162	1.055



减速机的用途和负载性质分类 Application & Load Classification

用途 Application		载荷分类 Load grade	用途 Application		载荷分类 Load grade
搅拌器 Blender	纯液体 Pure liquid	I	*塑料机械 Plastic machine	挤出机（颗粒/棒料/管料） Extruder (particle/rod/pipe)	I
	液体和固体 liquid and solid	II		吹塑机 Blow molder	II
	液体（密度可变） Liquid (variable density)		卷扬机（绞车） Windlass	中型机 Medium machine	II
鼓风机 Fan	离心式、叶片式 Centrifuge, vane	I		重型机 Heavy machine	III
	叶轮式 Impeller	II	石油工业 Petroleum industry	石蜡压滤机 Filter press for paraffin wax	II
压气机 压缩机 Air compressor	离心式 Centrifuge	I		结晶品冷冻机 Refrigerator crystalline matter	
	叶轮式、往复式(多缸) Impeller, reciprocation (multi-cylinder)	II	*橡胶与塑料工业 Rubber and plastic industry	精炼机、橡胶压延机 Refiner, rolling press	II
	往复式（单缸） Reciprocation (single-cylinder)	III		破胶机、混炼机 Crusher for rubber, blender	III
*运输机械 Conveyor	送料均匀 Constant feeding	I	纺织机械 Textile machine	织布机、梳棉机、轧布机 Loom, card, mangle	II
	送料不均 Non-constant feeding	II		纺纱机、洗涤机、印染机 Spinning, washer, dyeing machine	
	往复、振动式 Reciprocation, vibration	III	食品机械 Food processing machinery	灌瓶机、包装机、碾米机 Filling machine, packaging machine, rice mills	I
*石料机型 Stone machine	球磨机、桶形磨机 Ball mills, barrel mills	III		甘蔗粉碎机、切断机、*压榨机 Cane knives, cane mills, presser	II
	粉碎机、破碎机、转炉 Crusher, breakers convertor			搅拌机、绞肉机 清洗机 Blender, meat mincer, washer	

注：1. Ⅰ、稳定载荷；Ⅱ、中等冲击载荷；III、重冲击载荷 2. *—按每天工作 24 小时选取
Notes: 1. Ⅰ=stable load Ⅱ=medium load III=heavy load 2. *—select as per 24 hours per day

直联型摆线减速机选型步骤 Guidance of Selection

确认负载系数

实际需用转矩T_1计算 → 负载性质选定 → 负载系数选定

注：
T_1：低速轴实际需用转矩（N.m）
T_2：低速轴输出扭矩（N.m）
K：减速机与电动额定功率之比

$$K=\frac{\text{减速机许用功率}}{\text{电动机额定功率}}$$

选型一：
- T_1=100N.m
- 驱动设备：运输机(送料均匀)
  负载性质=Ⅰ
- 运转时间:24小时/天
  负载系数=1.2

选型一：
- T_1=3000N.m
- 驱动设备：搅拌器(密度可变)
  负载性质=Ⅱ
- 运转时间:断续工作3小时/天
  负载系数=1.0

选择机型号

计算电机功率 $P_1 \geqslant T_1 \times n_2 / 9550$ → 选型表 i、n_2确定 → 验算输出扭矩 $T_1 \leqslant T_2$ → K栏内是数值或※

P_1: 电动机的额定功率
n_2: 输出转速r/min
i: 传动比

如是数值 → 确定机型号 负载系数≤K

如是※ → 确定机型号 $T_1 \times$ 负载系数$\leqslant T_2$

- 输出转速: 89r/min
  电源频率：50Hz
  电 动 机: 4P

$$P_1 \geqslant \frac{T_1 \times n_2}{9550}\ (kW)$$

$$\frac{100 \times 88}{9550}=0.93(kW)$$

P_1=1.1(kW)

- 查选型表 n_2=88 i=17
- T_1(100N.m) < T_2(107N.m)
- K栏内数值
- 负载系数(1.2) < K(1.36)
  机型号B/JXJ1 选取

- 输出转速: 24r/min
  电源频率：50Hz
  电 动 机: 6P

$$P_1 \geqslant \frac{T_1 \times n_2}{9550}\ (kW)$$

$$\frac{3000 \times 24}{9550}=7.54(kW)$$

P1=1.1(kW)

- 查选型表 n_2=23 i=43
- T_1(3000N.m) < T_2(3068N.m)
- K栏内为※
- T_1(3000N.m) × 负载系数(1.0)
  =3000 < T_2(3068N.m)
  机型号B/JXJ5 选取

验算径向力

轴上负载径向力

注：
R：链轮、皮带轮等节圆半径（m）
F_r：实际需用径向力（N）
F_{r2}：低速轴上许用径向力（N）
(选型表中Fr2栏内值)
C_f：联接系数
F_s：冲击系数
L：负载作用系数

当实际上无冲击及负载作用在低速轴轴伸中点上时

验算径向力 $F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{C_f}$(N)

当有冲击及负载作用在低速轴轴伸中点以外时

验算径向力 $F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{L_f \cdot C_f \cdot F_s}$(N)

- 与使用设备联接方式：链轮
  链轮节圆半径：R=0.05m径
  向力作用位置:在低速轴
  轴伸中点上

验算输出轴上径向力

$$F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{Cf}$$

$$\frac{100}{0.05}=2000 < \frac{2530}{1}$$

机型号B/JXJ1符合要求

- 与所驱动设备联接方式：联轴器

选定型号 → 确定安装尺寸 → 确认润滑方式

- 输出轴方向：水平
  结构型式：专用电动机直联型
  安装型式：D1安装
  线盒位置：90°
  型号：BWD1-17-1.1-90°
- 安装尺寸：见外形尺寸表
- 润滑方式：油浴润滑

- 输出轴方向：立式向下
  结构型式：普通电动机直联型
  安装型式：F3安装
  型号：BLY5-43-11-F3
- 安装尺寸：见外形尺寸表
- 润滑方式：油泵润滑

注：使用系数栏为※时,如电机满负荷运转,减速机会出现过载现象,在这种情况下,一定要在输出扭矩栏内所规定的额定转矩值内使用或增加过载保护装置.

Confirm load factor

The actual need to rque T1 calculation → Load nature selected → Load coefficient selected

Note:
T1: actual need low speed shaft torque (N.m)
T2: low speed shaft allowable torque (N.m)
K: reducer and electric power rating ratios

$$K=\frac{\text{Reducer allowable power}}{\text{Motor power rating}}$$

Selection a:
- T1=100N.m
- Driving equipment:transport plane (feeding uniform)
  load property = Ⅰ
- Running time: 24 hours/days load coefficient = 1.2

Selection a:
- T1=3000N.m
- Driving equipment: blender (density variable)
  load property=Ⅱ
- Running time: 3 hours/days working intermittently
  load property=1.0

Choose maxhine

Calculation motor power $P_1 \geqslant T_1 \times n_2 / 9550$ → Modle selection guide i、n_2 confrim → Checking the output torque $T_1 \leqslant T_2$ → K Khurdle numerical value or※

P_1: Motor power rating
n_2: Output speed r/min
i: transmission ratio

if numerical value → Sure maxhine load factor≤K

SO ※ → Sure maxhine $T_1 \times$load factor$\leqslant T_2$

- Output rotate speed: 89r/min
  Supply frenquency : 50Hz
  Motor: 4P

$$P_1 \geqslant \frac{T_1 \times n_2}{9550}\ (kW)$$

$$\frac{100 \times 88}{9550}=0.93(kW)$$

P_1=1.1(kW)

- Check selection table n_2=88 i=17
- T_1(100N.m) < T_2(107N.m)
- K Column numerical
- load factor(1.2) < K(1.36)
  TYPE B/JXJ1 Choose

- Output rotate speed: 24r/min
  Supply frenquency：50Hz
  Motor: 6P

$$P_1 \geqslant \frac{T_1 \times n_2}{9550}\ (kW)$$

$$\frac{3000 \times 24}{9550}=7.54(kW)$$

P1=1.1(kW)

- Check selection table n_2=23 i=43
- T_1(3000N.m) < T_2(3068N.m)
- K Column numerical※
- T_1(3000N.m)×load factor(1.0)
  =3000 < T_2(3068N.m)
  TypeB/JXJ5 choose

Checking radial force

Shaft load radial force

Note:
R: sprocket and pulley pitch circle radius (m)
Fr: actual need radial force (N) Fr2: low speed shaft allowable radial force (N)
Cf: connection coefficient
Fs: impact coefficient Lf: the load effect coefficient

When in fact no impact and load Used in low speed shaft axis halfway point out

Checking radial force $F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{C_f}$(N)

When in fact impact and load Used in low speed shaft axis halfway point out

Checking radial force $F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{L_f \cdot C_f \cdot F_s}$(N)

selected modle → Confirm Installation Method → Confirm lubrication methods

- And use the equipment way.this way: the sprocke
  The sprocket quarter circle radius:
  R = 0.05 m
  Radial force role position: in low speed haft axis on the halfway point out

With the drive equipment way.this way: coupling

$$F_r=\frac{T_1}{R} \leqslant \frac{F_{r2}}{Cf}$$

$$\frac{100}{0.05}=2000 < \frac{2530}{1}$$

TYPE B/JXJ1 Size UP

- Output direction:Horizonal
  Stuctural style:Dedicated BLY
  Installation type:D1 set up
  Thermal box position:90°
  type:BWD1-17-1.1-90°
- set up size:Reference shape dimension table
- lubricating system:bath lubrication

- With the drive equipmt way: coupling

- Output direction：vertical
  Stuctural style：ordinary inline motor
  Installation type：F3set up
  type：BLY5-43-11-F3
- set up size：Reference shape dimension table
- lubricating system：bath lubrication

Note: use coefficient column for, such as motor is filled, slow down, opportunity to appear overload phenomenon, in this case, must be in allowable torque column the rating of the provisions torque values increase in use or overload protection device.

双轴型摆线减速机选型步骤 Guidance of Selection

确认负载系数

实际需用转矩T1计算

负载性质选定

负载系数选定

注：
T_1：低速轴实际需用转矩（N.M）
T_2: 低速轴输出扭矩（N.M）

选型一：

- T_1=3800N.M
- 驱动设备：运输机(送料不均匀)
  负载性质=Ⅱ
- 运转时间:连续8-10小时/天
  负载系数=1.2

选择机型号

传动比选定$i=n_1/n_2$

查选型表

确定机型号
$T_1 \times$ 负载系数$\leqslant T_2$

N1: 输入转速R/MIN
N2: 输出转速R/MIN
I: 传动比

- 输入转速N1: 750R/MIN
  输出转速N2: 25R/MIN
  电源频率：50HZ
  I=N1/N2=750/25=30
- 由选型表查：N2=26 N1=29
- 3800(N.M)×1.2＜5028(N.M)
  机型号B/XJ6 选取

验算径向力

轴上负载径向力

注：
R： 链轮、皮带轮等节圆半径（m）
F_r: 实际需用径向力（N）
F_{r2}: 许用径向力（N）
C_f: 联接系数
F_s: 冲击系数
L_f: 负载作用系数

- 与使用设备联接方式：链轮链轮节
  圆半径：R=0.10m
  径向力作用位置: 低速轴轴伸中点
  以外且有轻冲击
  与电动机联接方式：弹性联轴器

验算输出轴上径向力

$$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{Cf}$$

$$\frac{3800}{0.1}=38000 < \frac{51500}{1\times1\times1.2}=42917$$

机型号B/XJ6符合要求

当实际上无冲击及负载作用在低速轴轴伸中点上时

验算径向力
$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{C_f}$（N）

当有冲击及负载作用在低速轴轴伸中点以外时

验算径向力
$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{L_f \cdot C_f \cdot F_s}$（N）

选定型号

确定安装尺寸 → 确认润滑方式

- 输出轴方向：水平
  结构型式：轴输入型
  安装型式：D1安装
  线盒位置：180°
  型号：XJ6-29-180°
- 安装尺寸：见外形尺寸表
- 润滑方式：油浴润滑

注：使用系数栏为※时,如电机满负荷运转,减速机会出现过载现象,在这种情况下,一定要在许用扭矩栏内所规定的额定转矩值内使用或增加过载保护装置.

Confirm load factor

The actual need torque T1 calculation

Load nature selected

Load coefficient selected

Note:
T1: actual need low speed shaft torque (N.m)
T2: low speed shaft allowable torque (N.m)

selection one:

- T1=3800N.m
- Driving equipment: transport plane (feeding uniform) load property = Ⅱ
- Running time:Continuous 8-10 hours/days coefficient = 1.2

Choose maxhine

transmission raito selected
$i=n_1/n_2$

Modle selection guide

confrim lode factor
$T_1 \times$ lode$\leqslant T_2$

n1: input rotate speed r/min
n2: output rotate speed r/min
i:transmission ratio

- output rotate speedn1: 750r/min
  input totate speed n2: 25r/min
  supply frequency:50Hz
  I=N1/N2=750/25=30
- Selection table by check：N2=26 N1=29
- 3800(N.M)×1.2＜5028(N.M)
  typeB/XJ6 selected

Checking radial force

Shaft load radial force

Note:
R: sprocket and pulley pitch circle radius (m)
Fr: actual need radial force (N) Fr2: low speed shaft allowable radial force (N)
Cf: connection coefficient
Fs: impact coefficient Lf: the load effect coefficient

- And use the equipment way.this way: the sprocke
  The sprocket quarter circle radius: R=0.10m
  Radial force role position: low speed shaft axis stretch beyond the halfway point and light impact

Checking on low speed shaft radial force

$$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{Cf}$$

$$\frac{3800}{0.1}=38000 < \frac{51500}{1\times1\times1.2}=42917$$

typeB/XJ6 Size UP

When in fact no impact and load Used in low speed shaft axis halfway point out

Checking radial force
$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{C_f}$ (N)

When in fact impact and load Low speed shaft axis stretch beyond the halfway point

Checking radial force
$F_r = \frac{T_1}{R} \leqslant \frac{F_{r2}}{L_f C_f F_s}$（N）

selected modle

Confirm Installation Method → Confirm lubrication methods

- Output direction:Horizonal
  Stuctural style:axis input
  Installation type:D1 set up
  hermal box position:180°
  type:XJ6-29-180°
- set up size:Reference shape dimension table
- lubricating system:bath lubrication

Note: use coefficient column for, such as motor is filled, slow down, opportunity to appear overload phenomenon, in this case, must be in allowable torque column the rating of the provisions torque values increase in use or overload protection device.

单级选型表 Permissible for single stage reducer

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft
K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=9 n_2=167r/min				
P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	16.96	2.03	1810	0
0.55	25.21	1.36	1810	0
	28.36	2.73	2050	1
0.75	34.38	1.00	1810	0
	38.68	2.00	2050	1
		5.00	3330	2
1.1	56.73	1.36	2050	1
		3.64	3330	2
1.5	77.36	1.00	2050	1
		2.67	3330	2
		5.00	4710	3
2.2	113	1.82	3330	2
		3.41	4710	3
3	155	1.33	3330	2
		2.50	4710	3
4	206	1.00	3330	2
		1.88	4710	3
5.5	284	1.36	4710	3
7.5	387	1.00	4710	3

i=11 n_2=136r/min				
P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	20.73	2.03	1940	0
0.55	30.81	1.36	1940	0
	34.67	2.73	2190	1
0.75	42.02	1.00	1940	0
	47.27	2.00	2190	1
		5.00	3560	2
1.1	69.33	1.36	2190	1
		3.64	3560	2
1.5	94.55	1.00	2190	1
		2.67	3560	2
		5.00	5060	3
2.2	139	1.82	3560	2
		3.41	5060	3
		5.00	6450	4
3	189	1.33	3560	2
		2.50	5060	3
		5.00	6450	4
4	252	1.00	3560	2
		1.88	5060	3
		4.25	6450	4
5.5	347	1.36	5060	3
		2.00	6450	4
		3.67	13380	5
7.5	473	1.00	5060	3
		1.47	6450	4
		3.67	13380	5
		4.00	35920	6
11	693	1.00	6450	4
		1.41	13380	5
		2.38	35920	6
15	945	1.23	13380	5
		2.00	35920	6
18.5	1166	1.00	13380	5
		1.47	35920	6

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft
K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=17 n_2=88r/min				
P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	32.04	2.03	2240	0
0.55	47.62	1.36	2240	0
	53.58	2.73	2530	1
0.75	64.94	1.00	2240	0
	73.06	2.00	2530	1
		5.00	4120	2
1.1	107	1.36	2530	1
		3.64	4120	2
1.5	146	1.00	2530	1
		2.67	4120	2
		5.00	5840	3
2.2	214	1.82	4120	2
		3.41	5840	3
		5.00	7460	4
3	292	1.33	4120	2
		2.50	5840	3
		5.00	7460	4
4	390	1.00	4120	2
		1.88	5840	3
		3.41	7460	4
5.5	536	1.36	5840	3
		2.00	7460	4
		3.67	15480	5
7.5	731	1.00	5840	3
		1.47	7460	4
		3.67	15480	5
		4.00	39196	6
11	1072	1.00	7460	4
		1.41	15480	5
		2.38	39196	6
15	1461	1.23	15480	5
		2.00	39196	6
18.5	1802	1.00	15480	5
		1.47	39196	6

i=23 n_2=65r/min				
P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	43.34	2.2	2480	0
0.55	64.43	1.36	2480	0
	72.48	2.73	2810	1
0.75	87.86	1.00	2480	0
	98.84	2.00	2810	1
		3.67	4560	2
1.1	145	1.36	2810	1
		2.73	4560	2
1.5	198	1.00	2810	1
		2.00	4560	2
		3.67	6460	3
2.2	290	1.36	4560	2
		2.50	6460	3
		5.00	8250	4
3	395	1.00	4560	2
		1.83	6460	3
		5.00	8250	4
4	395	※	4560	2
	527	1.38	6460	3
		2.75	8250	4
5.5	725	1.00	6460	3
		2.00	8250	4
		3.67	17120	5
7.5	725	※	6460	3
	988	1.47	8250	4
		2.75	17120	5
		4.00	46140	6
11	1450	1.00	8250	4
		1.41	17120	5
		2.38	46140	6
15	1977	1.23	17120	5
		2.00	46140	6
18.5	2438	1.00	17120	5
		1.47	46140	6

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft
K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=29 n_2=51r/min

P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	54.65	1.49	2640	0
0.55	81.24	1.00	2640	0
	91.39	2.00	3020	1
0.75	125	1.47	3020	1
		2.93	4910	2
1.1	183	1.00	3020	1
		2.00	4910	2
1.5	185	※	3020	1
	249	1.47	4910	2
		3.67	6960	3
2.2	370	1.00	4910	2
		2.5	6960	3
		5.00	8890	4
3	370	※	4910	2
	499	1.83	6960	3
		3.67	8890	4
4	665	1.38	6960	3
		2.75	8890	4
5.5	914	1.00	6960	3
		2.00	8890	4
		2.92	18450	5
7.5	914	※	6960	3
	1246	1.47	8890	4
		2.75	18450	5
		3.36	46600	6
11	1828	1.00	8890	4
		1.36	18450	5
		2.00	46600	6
15	2493	1.00	18450	5
		1.68	46600	6
18.5	3075	1.23	46600	6

i=35 n_2=43r/min

P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	65.96	1.49	2830	0
0.55	98.05	1.00	2830	0
	110	2.00	3220	1
0.75	150	1.47	3220	1
		2.00	5230	2
1.1	221	1.00	3220	1
		1.36	5230	2
1.5	223	※	3220	1
	301	1.00	5230	2
		2.67	7420	3
	301	※	5230	2
2.2	441	1.82	7420	3
		3.41	9470	4
3	301	※	5230	2
	602	1.33	7420	3
		2.50	9470	4
4	802	1.00	7420	3
		1.88	9470	4
5.5	802	※	7420	3
	1103	1.36	9470	4
		2.50	19650	5
7.5	1504	1.00	9470	4
		2.50	19650	5
		2.72	49670	6
11	1504	※	9470	4
	2231	1.36	19650	5
		2	49670	6
15	3042	1.00	19650	5
		1.36	49670	6
18.5	3752	1.00	49670	6

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft
K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=43 n_2=35r/min

P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.37	81.03	1.00	3030	0
0.55	136	1.36	3450	1
0.75	185	1.00	3450	1
		2.00	5600	2
1.1	185	※	3450	1
	271	1.36	5600	2
1.5	185	0.5	3450	1
	370	1.00	5600	2
		2.67	7940	3
2.2	370	※	5600	2
	542	1.82	7940	3
		2.50	10140	4
3	370	0.5	5600	2
	739	1.33	7940	3
		1.83	10140	4
4	986	1.00	7940	3
		1.38	10140	4
5.5	986	※	7940	3
	1355	1.00	10140	4
		2.00	21040	5
7.5	1848	1.47	21040	5
		2.00	51500	6
11	2710	1.00	21040	5
		1.47	51500	6
15	3696	1.00	51500	6

i=59 n_2=25r/min

P kW	T_2 N.m	K	Fr_2 N	机座号 Base No.
0.55	186	1.00	3860	1
0.75	186	※	3860	1
	254	1.47	6260	2
1.1	186	※	3860	1
	372	1.00	6260	2
1.5	372	0.73	6260	2
	507	1.47	8890	3
2.2	372	※	6260	2
	744	1.00	8890	3
		1.82	11350	4
3	744	※	8890	3
	1014	1.33	11350	4
4	744	※	8890	3
	1352	1.00	11350	4
5.5	1352	※	11350	4
	1859	1.36	23540	5
7.5	2536	1.00	23540	5
		2.00	51500	6
11	3719	1.47	51500	6
15	5072	1.00	51500	6

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft

K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=71 n_2=21r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.55	224	1.00	4090	1
0.75	224	※	4090	1
	305	1.47	6640	2
1.1	224	※	4090	1
	448	1.00	6640	2
1.5	448	0.73	6640	2
	610	1.47	9420	3
2.2	448	※	6640	2
	895	1.00	9420	3
		1.82	12020	4
3	895	※	9420	3
	1220	1.33	12020	4
4	1627	1.00	12020	4
5.5	1627	※	12020	4
	2237	1.36	24950	5
7.5	3051	1.00	24950	5
		1.36	51500	6
11	4475	1.00	51500	6

i=87 n_2=17r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.75	374	1.00	7130	2
1.1	374	※	7130	2
1.5	374	※	7130	2
	748	1.00	10100	3
2.2	748	※	10100	3
	1097	1.36	12920	4
3	748	※	10100	3
	1496	1.00	12920	4
4	1496	※	12920	4
5.5	2742	1.00	26780	5
7.5	3739	1.00	26780	5
		1.36	51500	6
11	5484	1.00	51500	6

※ 使用系数带※的型号,由于使用系数小于1，定货时请咨询我司。

Notes:for service factor with※,if motor is full load, overload of reducer will occur,Under such circumstance, it must be used or added overloading protector within nominal torque according to permissible torque table.

双级选型表 Permissible torque for double–stage reducer

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft

K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=121(11×11) n_2=12r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.37	143	3.94	8000	20
0.55	212	2.66	8000	20
0.75	371	1.61	8000	20
	474	2.64	11340	31
1.1	695	1.39	11340	31
		2.27	14510	41
		2.27	14510	42
1.5	948	1.02	11340	31
		1.66	14510	41
		1.66	14510	42
2.2	1390	1.14	14510	41
		1.14	14510	42
		3.21	30080	52
		3.21	30080	53
3	1895	1.62	30080	52
		1.62	30080	53
4	2527	1.21	30080	52
		1.21	30080	53
		2.92	51500	63
5.5	3066	※	30080	53
	3474	2.13	51500	63
7.5	4738	1.56	51500	63

i=187(11×17) n_2=8r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.37	220	2.73	8000	20
0.55	327	1.83	8000	20
0.75	732	1.71	11340	31
		3.42	14510	41
		3.42	14510	42
1.1	1074	1.16	11340	31
		2.33	14510	41
		2.33	14510	42
1.5	1250	※	11340	31
	1464	1.71	14510	41
		1.71	14510	42
2.2	2148	1.16	14510	41
		1.16	14510	41
		1.96	30080	52
		1.96	30080	53
3	2929	1.44	30080	52
		1.44	30080	53
4	3905	1.41	30080	52
		1.41	30080	53
		2.56	51500	63
5.5	5369	1.86	51500	63
7.5	7322	1.37	51500	63

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft

K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=289(17×17) n_2=5r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.37	340	1.76	8000	20
0.55	506	1.19	8000	20
0.75	1132	1.1	11340	31
		2.21	14510	41
		2.21	14510	42
1.1	1660	1.51	14510	41
		1.51	14510	42
1.5	2263	1.10	14510	41
		1.10	14510	42
		2.21	30080	52
2.2	3319	1.51	30080	52
		1.51	30080	53
3	4217	※	30080	52
		※	30080	53
4	6035	1.66	51500	63
5.5	8292	1.21	51500	63
7.5	10000	※	51500	63

i=493(17×29) n_2=3r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.37	581	1.03	8000	20
0.75	1930	1.3	14510	41
		1.3	14510	42
1.1	2500	※	14510	41
		※	14510	42
	2831	1.77	30080	52
1.5	3861	1.30	30080	52
2.2	5000	※	30080	52
		※	30080	53
4	10000	※	51500	63

P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft

K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

i=731(17×43) n_2=2r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.75	2500	※	14510	41
		※	14510	42
	2862	1.75	30080	52
1.1	4198	1.19	30080	52
1.5	5000	※	30080	52

i=1003(17×59) n_2=1.5r/min				
P	T_2	K	Fr_2	机座号
kW	N.m		N	Base No.
0.75	3927	1.27	30080	52
1.1	5000	※	30080	52

双轴型选型表

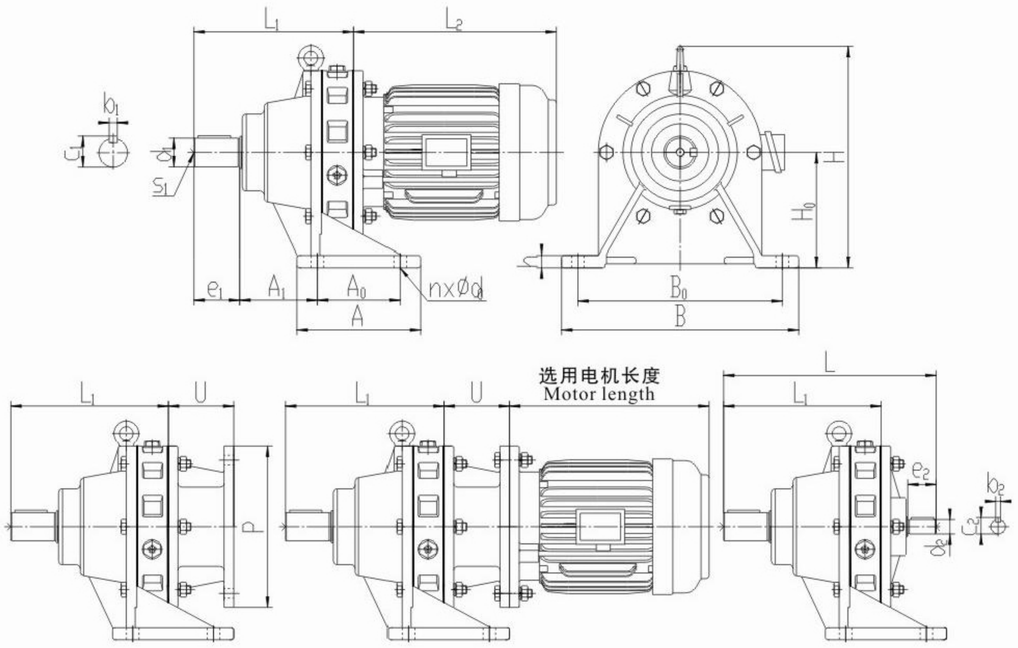
P–电机功率 Motor power
T_2–输出扭矩 Output torque
Fr_2–输出轴径向载荷 Radial load on output shaft

K–使用系数 Service factor
i–传动比 Ratio
n_2–输出转速 Output speed

机型号 Base No.	i	9	11	17	23	29	35	43	59	71	87
	n_2 (r/min)	167	136	88	65	52	43	35	25	21	17
B/JXJ0	P (kW)	1.1	1.1	0.75	0.75	0.55	0.55				
	T_2 (N.m)	57	69	73	99	92	112				
	F_{r2} (N)	2200	2370	2730	3020	3250	3470				
B/JXJ1	P (kW)	2.2	2.2	2.2	1.5	1.1	1.1	0.75	0.55	0.55	
	T_2 (N.m)	113	139	214	198	185	223	185	186	224	
	F_{r2} (N)	2050	2190	2530	2810	3020	3220	3450	3860	4090	
B/JXJ2	P_1 (kW)	4	4	4	3	2.2	1.5	1.5	1.1	1.1	0.75
	T_2 (N.m)	206	252	390	395	370	304	370	372	448	374
	F_{r2} (N)	3330	3560	4120	4560	4910	5230	5600	6260	6640	7130
B/JXJ3	P (kW)	11	7.5	7.5	5.5	5.5	4	4	2.2	2.2	1.5
	T_2 (N.m)	567	473	731	725	924	811	986	744	895	748
	F_{r2} (N)	4710	5060	5840	6460	6960	7420	7940	8890	9420	10100
B/JXJ4	P (kW)	11	11	11	11	11	7.5	5.5	4	4	3
	T_2 (N.m)	567	693	1072	1450	1848	1521	1355	1352	1627	1496
	F_{r2} (N)	6020	6450	7460	8250	8890	9470	10140	11350	12020	12920
B/JXJ5	P (kW)		18.5	18.5	18.5	15	15	11	7.5	7.5	7.5
	T_2 (N.m)		1166	1802	2438	2520	3042	2710	2536	3051	3739
	F_{r2} (N)		13380	15480	17120	18450	19650	21040	23540	24950	26780
B/JXJ6	P (kW)		18.5	18.5	18.5	18.5	18.5	15	15	11	11
	T_2 (N.m)		1166	1802	2438	3075	3752	3696	5072	4475	5484
	F_{r2} (N)		35920	39196	46140	46600	49670	51500	51500	51500	51500

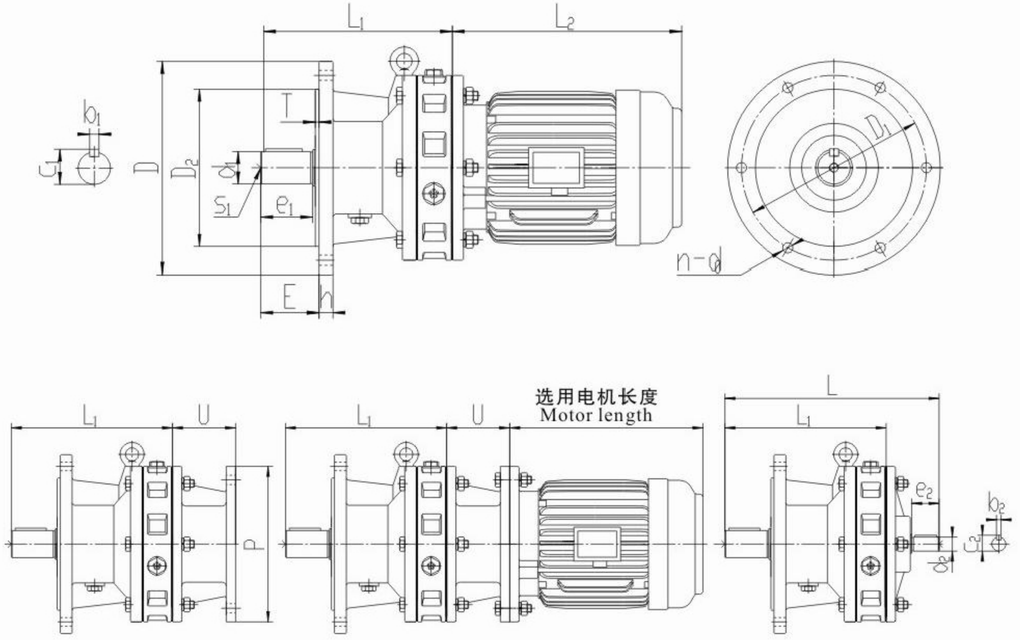
外型尺寸图 Out line dimension sheet

单级卧式外形尺寸表
Outline dimensions for horizontal mounting single stage



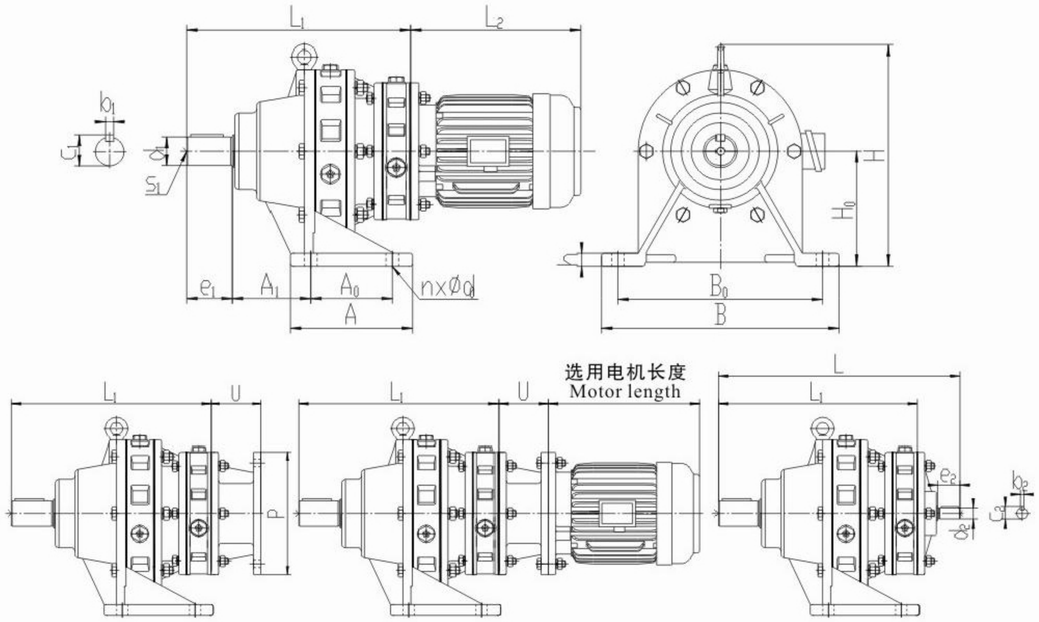
型号 Model	机座号 Base No.	安装尺寸 Mounting dimension						轴伸联接尺寸 Shaft extension dimension								外型尺寸 Outline dimension					
								输出轴 Input shaft					输入轴 Output shaft								
		H0	A1	A0	B0	n	d0	S1	d1	b1	c1	e1	d2	b2	c2	e2	H	A	B	h	L	L1
BW*-i BWD*-i-p BWY*-i-p	0	100	58	90	150	4	12	M8	30	8	33	35	15	5	17	22	190	120	185	13	214	165
	1	120	69	110	240	4	13.5	M10	35	10	38	56	18	6	20.5	35	230	160	280	15	262	194
	2	140	76	150	280	4	14.5	M10	45	14	48.5	68	22	6	24.5	40	305	200	320	20	320	246
	3	160	79	200	340	4	19	M10	55	16	59	80	30	8	33	55	360	250	390	25	393	296
	4	200	93	260	380	4	22	M12	70	20	74.5	101	35	10	38	62	430	320	430	25	482	374
	5	240	54	340	440	4	22	M16	90	25	95	119	45	14	48.5	80	495	400	490	25	580	435
	6	280	60	440	500	4	26	M20	100	28	106	138	50	14	53.5	80	590	520	560	35	670	528
XJ*-i JXJD*-i-p JXJY*-i-p	0	100	67	90	180	4	11	M8	25	8	28	34	15	5	17	22	191	120	210	12	208	159
	1	140	95	100	250	4	15.5	M10	35	10	38	56	18	6	20.5	35	245	150	290	15	263	195
	2	140	65	180	285	4	15.5	M10	50	16	53.5	70	22	6	24.5	40	310	230	335	20	321	247
	3	160	70	220	350	4	20	M10	65	18	69	110	30	8	33	55	365	280	410	22	447	353
	4	190	93	270	400	4	22	M12	80	22	85	105	35	10	38	62	430	350	460	25	486	378
	5	250	35	380	480	4	22	M16	90	25	95	130	45	14	48.5	80	540	440	530	25	631	462
	6	290	45	480	560	4	26	M20	100	28	106	165	50	14	53.5	80	650	560	620	35	725	554

单级立式外形尺寸表
Outline dimensions for vertical mounting single stage



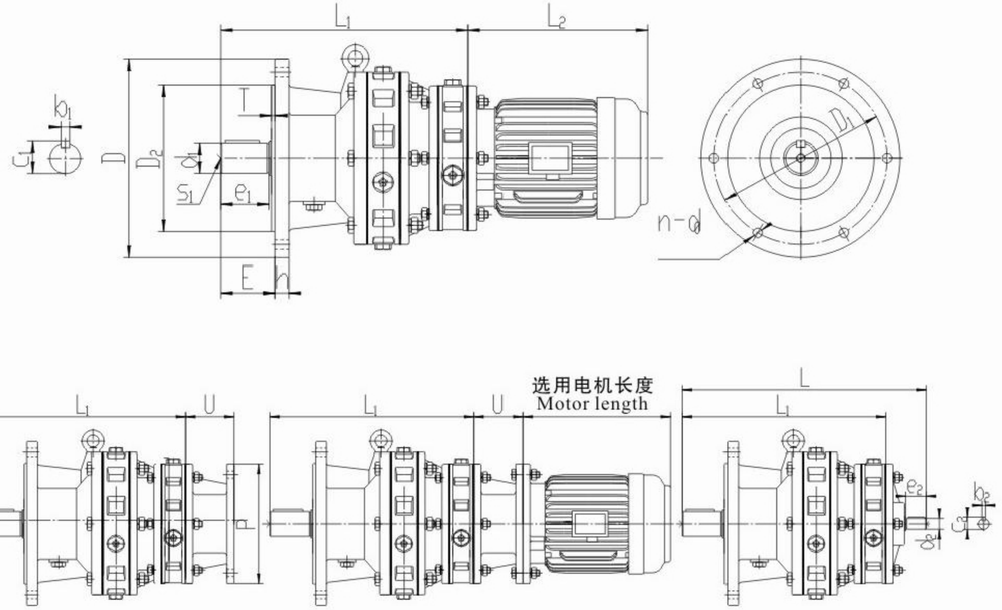
型号 Model	机座号 Base No.	安装尺寸 Mounting dimension						轴伸联接尺寸 Shaft extension dimension								外型尺寸 Outline dimension				
								输出轴 Input shaft					输入轴 Output shaft							
		D	D1	D2	E	n	d0	S1	d1	b1	c1	e1	d2	b2	c2	e2	h	T	L	L1
BL*-i BLD*-i-p BLY*-i-p	0	190	160	140	39	4	11	M8	30	8	33	35	15	5	17	22	11	4	214	165
	1	230	200	170	54	6	11	M10	35	10	38	46	18	6	20.5	35	12	4	263	195
	2	260	230	200	70	6	11	M10	45	14	48.5	60	22	6	24.5	40	15	4	320	246
	3	340	310	270	81	6	13	M10	55	16	59	74	30	8	33	55	15	5	390	296
	4	430	390	350	109	12	13	M12	70	20	74.5	101	35	10	38	62	25	5	482	374
	5	490	450	400	131	12	18	M16	90	25	95	114	45	14	48.5	80	30	8	580	435
	6	580	520	460	138	12	24	M20	100	28	106	138	50	14	53.5	80	35	8	670	528
XJL*-i JXJLD*-i-p JXJLY*-i-p	0	180	160	130	39	4	11	M8	25	8	28	35	15	5	17	22	11	4	208	165
	1	230	200	170	52	6	11	M10	35	10	38	46	18	6	20.5	35	12	4	261	193
	2	260	230	200	65	6	11	M10	50	16	53.5	57	22	6	24.5	40	15	4	315	241
	3	340	310	270	105	6	14	M10	65	18	69	96	30	8	33	55	15	5	414	320
	4	400	360	316	114	8	18	M12	80	22	85	105	35	10	38	62	22	5	487	379
	5	495	450	400	140	12	18	M16	90	25	95	130	45	14	48.5	80	30	6	631	462
	6	580	520	455	177	12	24	M20	100	28	106	165	50	14	53.5	80	35	8	725	554

双级卧式外形尺寸表
Outline dimensions for horizontal mounting double stage



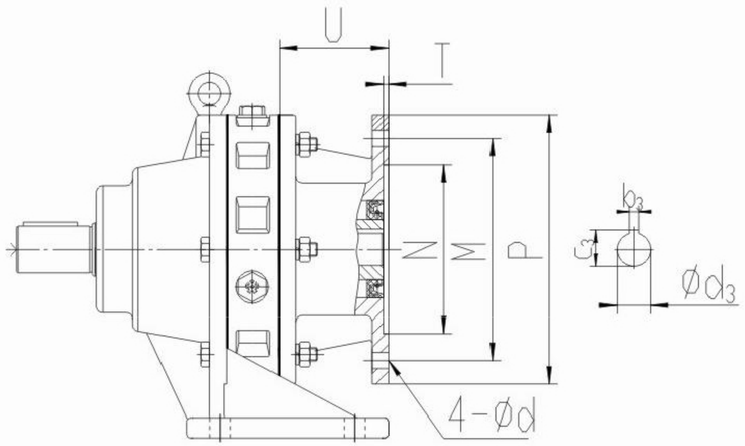
型号 Model	机座号 Base No.	安装尺寸 Mounting dimension						轴伸联接尺寸 Shaft extension dimension								外型尺寸 Outline dimension					
								输出轴 Input shaft					输入轴 Output shaft									
		H0	A1	A0	B0	n	d0	S1	d1	b1	c1	e1	d2	b2	c2	e2	H	A	B	h	L	L1
BL*-I BLD*-i-p BLY*-i-p	10	120	69	110	240	4	13.5	M10	35	10	38	56	15	5	17	22	230	160	280	15	325	274
	20	140	76	150	280	4	14.5	M10	45	14	48.5	68	15	5	17	22	305	200	320	20	369	318
	31	160	79	200	340	4	19	M10	55	16	59	80	18	6	20.5	35	360	250	390	25	446	378
	41	200	93	260	380	4	22	M12	70	20	74.5	101	18	6	20.5	35	430	320	430	25	530	462
	42	200	93	260	380	4	22	M12	70	20	74.5	101	22	6	24.5	40	430	320	430	25	564	490
	52	240	54	340	440	4	22	M16	90	25	95	119	22	6	24.5	40	495	400	490	25	634	560
	53	240	54	340	440	4	22	M16	90	25	95	119	30	8	33	55	495	400	490	25	680	582
	63	280	60	440	500	4	26	M20	100	28	106	138	30	8	33	55	590	520	560	35	746	648
XJL*-i JXJLD*-i-p JXJLY*-i-p	10	140	95	100	250	4	15.5	M10	35	10	38	56	15	5	17	22	245	150	290	15	325	274
	20	140	65	180	285	4	15.5	M10	50	16	53.5	70	15	5	17	22	310	230	335	20	369	318
	31	160	70	220	350	4	20	M10	65	18	69	110	18	6	20.5	35	365	280	410	22	446	378
	41	190	93	270	400	4	22	M12	80	22	85	105	18	6	20.5	35	430	350	460	25	530	462
	42	190	93	270	400	4	22	M12	80	22	85	105	22	6	24.5	40	430	350	460	25	564	490
	52	250	35	380	480	4	22	M16	90	25	95	130	22	6	24.5	40	540	440	530	25	634	560
	53	250	35	380	480	4	22	M16	90	25	95	130	30	8	33	55	540	440	530	25	680	582
	63	290	45	480	560	4	26	M20	100	28	106	165	30	8	33	55	650	560	620	35	746	648

双级立式外形尺寸表
Outline dimensions for vertical mounting double stage



型号 Model	机座号 Base No.	安装尺寸 Mounting dimension						轴伸联接尺寸 Shaft extension dimension								外型尺寸 Outline dimension					
								输出轴 Input shaft					输入轴 Output shaft									
		D	D1	D2	E	n	d0	S1	d1	b1	c1	e1	d2	b2	c2	e2	h	T	L	L1		
BLE*-I BLED*-i-p BLEY*-i-p	10	190	160	140	39	4	11	M8	30	8	33	35	15	5	17	22	11	4	325	274		
	20	230	200	170	54	6	11	M10	35	10	38	46	18	6	20.5	35	12	4	369	318		
	31	260	230	200	70	6	11	M10	45	14	48.5	60	22	6	24.5	40	15	4	446	378		
	41	340	310	270	81	6	13	M10	55	16	59	74	30	8	33	55	15	5	530	462		
	42	340	310	270	81	6	13	M10	55	16	59	74	30	8	33	55	25	5	564	490		
	52	430	390	350	109	12	13	M12	70	20	74.5	101	35	10	38	62	25	5	634	560		
	53	490	450	400	131	12	18	M16	90	25	95	114	45	14	48.5	80	30	8	680	582		
	63	580	520	460	138	12	24	M20	100	28	106	138	50	14	53.5	80	35	8	746	648		
XJLE*-i JXJLED*-i-p JXJLEY*-i-p	10	230	200	170	52	6	11	M10	35	10	38	46	15	5	17	22	12	4	325	274		
	20	260	230	200	65	6	11	M10	50	16	53.5	57	15	5	17	22	15	4	369	318		
	31	340	310	270	105	6	14	M10	65	18	69	96	18	6	20.5	35	15	5	446	378		
	41	400	360	316	114	8	18	M12	80	22	85	105	18	6	20.5	35	22	5	530	462		
	42	400	360	316	114	8	18	M12	80	22	85	105	22	6	24.5	40	22	5	564	490		
	52	495	450	400	140	12	18	M16	90	25	95	130	22	6	24.5	40	30	6	634	560		
	53	495	450	400	140	12	18	M16	90	25	95	130	30	8	33	55	30	6	680	582		
	63	580	520	455	177	12	24	M20	100	28	106	165	30	8	33	55	35	8	746	648		

普通电机法兰尺寸 Flange Size for ordinary motor with flange

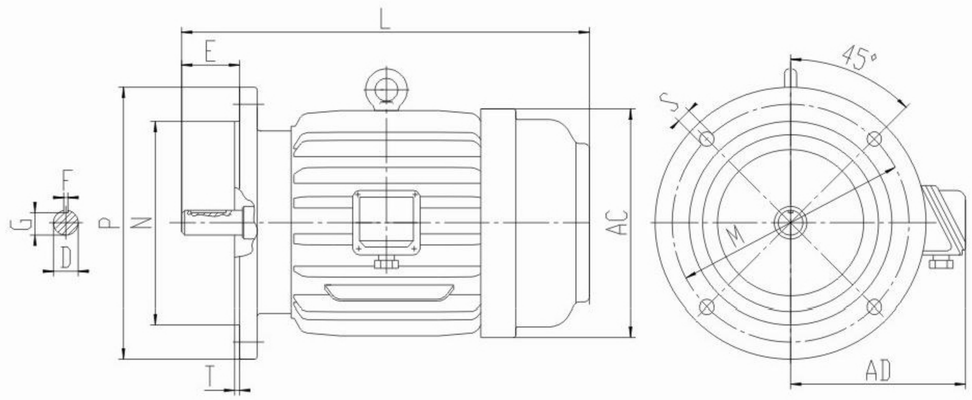


机座号 Base NO.	法兰型号	P	M	N	T	d	U	d3										b3	t3
								9	11	17	23	29	35	43	59	71	87		
0#	71B5	160	130	110	4	9	70	14	14	14	14	14	14	14	—	—	—	5	16.3
	80B5	200	165	130	4	11	70	19	19	19	19	19	19	—	—	—	—	6	21.8
	90B5	200	165	130	4	11	70	24	24	—	—	—	—	—	—	—	—	8	27.3
1#	80B5	200	165	130	4	11	81	19	19	19	19	19	19	19	19	19	—	6	21.8
	90B5	200	165	130	4	11	81	24	24	24	24	24	24	—	—	—	—	8	27.3
	100/112B5	250	215	180	5	13.5	93	28	28	28	—	—	—	—	—	—	—	8	31.3
2#	80B5	200	165	130	5	11	89	19	19	19	19	19	19	19	19	19	19	6	21.8
	90B5	200	165	130	5	11	89	24	24	24	24	24	24	24	24	—	—	8	27.3
	100/112B5	250	215	180	5	15	89	28	28	28	28	28	—	—	—	—	—	8	31.3
3#	90B5	200	165	130	7	12	91.5	24	24	24	24	24	24	24	24	24	24	8	27.3
	100/112B5	250	215	180	7	14	91.5	28	28	28	28	28	28	28	28	28	—	8	31.3
	132B5	300	265	230	7	14	91.5	38	38	38	38	38	—	—	—	—	—	10	41.3
4#	100/112B5	250	215	180	7	15	121.5	28	28	28	28	28	28	28	28	28	28	8	31.3
	132B5	300	265	230	7	15	88.5	38	38	38	38	38	38	38	—	—	—	10	41.3
	160B5	350	300	250	7	19	146.5	42	42	42	42	—	—	—	—	—	—	12	45.3
5#	132B5	300	265	230	7	15	92	38	38	38	38	38	38	38	38	38	38	10	41.3
	160B5	350	300	250	7	19	122	42	42	42	42	42	42	42	—	—	—	12	45.3
	180B5	350	300	250	7	19	122	48	48	48	48	—	—	—	—	—	—	14	51.8
6#	132B5	300	265	230	7	15	89	38	38	38	38	38	38	38	38	38	38	10	41.3
	160B5	350	300	250	7	19	119	42	42	42	42	42	42	42	42	42	42	12	45.3
	180B5	350	300	250	7	19	119	48	48	48	48	48	48	48	—	—	—	14	51.8

摆线针轮减速机专用电机尺寸 Special motor dimension for cycloid reducer

型号 Model	尺寸 Dimension	输入功率（4极电机 输入转速 1400r/min） Input power (4 poles, input speed 1400 r/min)												
		0.37	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18 .5	22
0	摆线专用电机 长度L2(mm) Special motor length L2(mm)	225	245	245											
	摆线专用电机 重量 (kg) Special motor weight (kg)	11	15	17											
1	摆线专用电机 长度L2(mm) Special motor length L2(mm)		255	255	270	305									
	摆线专用电机 重量 (kg) Special motor weight (kg)		17	18	22	27									
2	摆线专用电机 长度L2(mm) Special motor length L2(mm)			255	270	305	325	325	340						
	摆线专用电机 重量 (kg) Special motor weight (kg)			18	22	27	36	38	45						
3	摆线专用电机 长度L2(mm) Special motor length L2(mm)						325	325	340	350	420				
	摆线专用电机 重量 (kg) Special motor weight (kg)						36	38	52	68	80				

电动机型号参数表 Motor coefficent tables



B5型机座安装型式 B5 Mounting position

机座号 Base NO.	4极	6极	外型尺寸 Outline dimension			安装尺寸 Mounting dimension					轴伸尺寸 Shaft extension dimension			
	KW	KW	AC	AD	L	ϕP	ϕM	ϕN	T	ϕS	E	F	ϕD	G
71M	0.25	0.18	140	80	255	160	130	110	3.5	10	30	5	14	11
	0.37	0.25												
80M	0.55	0.37	155	145	295	200	165	130	3.5	12	40	6	19	15.5
	0.75	0.55												
90S	1.1	0.75	175	155	320	200	165	130	3.5	12	50	8	24	20
90L	1.5	1.1			345	200	165	130	3.5	12	50	8	24	20
100L	2.2	1.5	195	180	385	250	215	180	4	15	60	8	28	24
	3													
112M	4	2.2	215	190	400	250	215	180	4	15	60	8	28	24
132S	5.5	3	260	210	470	300	265	230	4	15	80	10	38	33
132M	7.5	4	260	210	510	300	265	230	4	15	80	10	38	33
		5.5												
160M	11	7.5	315	255	615	350	300	250	5	19	110	12	42	37
160L	15	11			670	350	300	250	5	19	110	12	42	37
180M	18.5		350	280	700	350	300	250	5	19	110	14	48	42.5
180L	22	15			740	350	300	250	5	19	110	14	48	42.5
200L	30	18.5	395	305	770	400	350	300	5	19	110	16	55	49
		22												

注：4级三相异步电动机同步转速1500r/min、380V.50Hz

6级三相异步电动机同步转速1000r/min、380V.50Hz

Notes:Four poles,three-phase asynchronous,synchronous speed:1500r/min、380V.50Hz
Six poles,three-phase asynchronous,synchronous speed:1500r/min、380V.50Hz

润滑 Lubricant

1、润滑方式

1. Method of lubrication

单级 Single reducer	机型 type	0	1	2	3	4	5	6		
	卧式 horizontal mounted	油浴式 Oil bath type				油浴式/油泵润滑 Oil bath type / Oil pump lubrication				
	立式 Vertical mounted	油浴式 Oil bath type				油浴式/油泵润滑 Oil bath type / Oil pump lubrication				
双级 Double-stage Reducer	机型 type	10	20	30	31	41	42	52	53	63
	卧式 horizontal mounted	油浴式 Oil bath type				油浴式/油泵润滑 Oil bath type / Oil pump lubrication				
	立式 Vertical mounted	油浴式 Oil bath type				油浴式/油泵润滑 Oil bath type / Oil pump lubrication				

2、本机在出厂时已加入润滑油，使用前不必再加润滑油；

3、在常温下选用40#或50#机械油，也可以选用更好的70#或90#极压工业齿轮油；

4、润滑方式请参照安装型式，不是所有的4#、5#、6#摆线减速机都是油泵循环润滑；

5、油泵循环润滑式，要注意开机前先启动油泵电机，视油泵是否供油，否则应将油泵电机接线换相，由于油泵是按指定方向运转的，还有油泵的过滤器要注意清洗以防堵塞；

6、换油制度：第一次加油动转一个月交换机油，并将内部油圬冲净。以后可每隔3-6月交换一次。如工作环境恶劣，尽可能缩短换油时间。长时间没有使用的减速机重新开机，必须先更换润滑油。

2, the machine in the factory, has joined lubricating oil, before using don't have to add the lubricating oil;

3 . at room temperature, choose 40 or 50 # # JiXieYou, also can choose better # or # extreme pressure industry with round the oil;

4, lubrication methods please refer to install type, not all 4 #, 5 #, 6 # cycloid reducer is lubrication oil pump cycle;

5, oil pump cycle lubrication type, must pay attention to start before starting the oil pump motor, depending on whether the oil pump oil supply, or should be the oil pump motor wiring commutation, because the oil pump is assigned the functioning of the direction, and to pay attention to cleaning of oil pump filter jam in case;

6, oil system: first come on a month regulated exchange the oil, and the internal oil Wu rinse. But after every three to six months exchange a. Such as working conditions, shorten the time as far as possible for oil. Long time no use of the deceleration machine to boot, must first change lubricating oil.

摆线系列针轮减速机加油量（单位：ml） Fill oil quantity (unit: ml)

机座号 Base NO.	0	1	2	3	4	5	6
安装型式 Mounting position	机械油40# Ji xie you 40#						
B3、B6、B7、B8、B9	250	400	700	1400	2000	3200	4500
B5	300	450	750	1500	2200	3400	4800
V1	400	600	900	1800	800	1200	2000
V3	300	450	750	1500	2200	3400	4800
V5	350	500	900	1600	2300	3600	5000
V6	300	450	750	1500	2200	3400	4800

机座号 Base NO.	10	20	21	31	41	42	52	53	63	64
安装型式 Mounting position	机械油40# Ji xie you 40#									
B3、B6、B7、B8、B9	500	800	900	1600	2200	2500	3600	4000	5500	6300
B5	600	900	1000	1750	2400	2700	3800	4200	5700	6500
V1	800	1100	1200	2100	1100	800	1200	1200	2000	2000
V3	600	900	100	1750	2400	2700	3800	4200	5700	6500
V5	700	1000	1100	1800	2500	2800	4000	4400	6000	6800
V6	600	900	1000	1750	2400	2700	3800	4200	5700	6500

注：如不能准确把握加油量，请以油镜中心为准。

推荐用润滑油牌号 Lubricant brand recommended

环境温度 Ambient temperature	国标 Chinese standard GB / T5903 中极压工业齿轮油 Medium super pressure industrial gear oil	埃索 ESSO SPARTANEP	壳牌 SHEEL OMALA	美孚 MOBIL 美孚齿轮油	嘉德士 Caltex Meropa	英国石油 BP ENERGOL	海湾 GULF EP
-10℃ ~ 5℃	L-CKC68	EP68	68	626 ISO.VG68	68	GR-XP68	HD68
0℃ ~ 35℃	L-CKC100 L-CKC150	EP100 EP150	100 150	627 ISO.VG100 629 ISO.VG150	100 150	GR-XP100 GR-XP150	HD100 HD150
30℃ ~ 50℃	L-CKC220 L-CKC320 L-CKC460	EP220 EP320 EP460	220 330 460	630 ISO.VG220 632 ISO.VG320 633 ISO.VG320 634 ISO.VG460	220 330 460	GR-XP220 GR-XP320 GR-XP460	HD220 HD320 HD460

一般故障及排除方法 Solutions on problems

故障 Problem		可能的原因 Reason	处理方法 Solutions
漏油 Oil leakage	输入，输出轴部漏油 Oil leakage from input or output shaft	油封损伤 Oil seal wore out	更换油封 Replace oil seal
	针齿壳，机座部处漏油 Oil leakage from pin wheel Housing the base	螺栓松动 Bolt looseness	拧紧螺拴 Tighten bolt
	油漏入电机内部 Oil leakage into motor	油封损伤 Oil seal wore out	更换油封 Replace oil seal
		注油过多 Excess oil	放 油 Oil discharge
电动机在运转而输出轴不转 Motor running ,but output shaft don't run		键损坏 Key wore out	确认后与本公司联系 Contact us after confirmation
温度剧烈上升 Overheating		负荷过大 Overloading	按规定降低负荷 Reduce the load
		电压下降或升高 Voltage down or up	与电力公司联系 Contact with the Electric power company
		使用场所的温度高 High temperature in working condition	改变通风方法等 Change the ventilation method, etc.
		轴承受损 Bearing wore out	更换轴承 Replace bearing
		摆线轮异常磨损 Cycloid gear wore out	更换摆线轮 Replace the cycloidal gear
有异常声音，震动非常大 Noise, big vibration		轴承内有异物，已损伤 Foreign objects in bearing, wore out	更换轴承 Replace bearing
		摆线轮齿面夹有异物 Foreign objects in the surface of cycloid gear	除掉异物看是否有损伤 Remove objects and check if wear out
		摆线轮齿面损伤 The surface of cycloid gear wore out	更换摆线轮 Replace the cycloid gear
		因安装面不平，台架歪斜 Base lean due to uneven mounting surface	把安装台整平 level off mounting platform
		安装台刚性不足引起共振 Not enough rigidity of install platform cause resonance.	加固安装台，提高刚性 Strengthen the install platform, improve the rigidity.
		与主机轴不同心 Not concentric with the main shaft	使轴线同心 Concentric with the main shaft
		主机的振动传递过来 Vibration from main engine	单独运转减速机，查明声源 Run reduce independently,check noise source