附录Ⅰ-减速机的安装、润滑和维护

(1) 减速机的安装

减速机与电动机、工作机器之间的联接应采用弹性联轴器、齿式联轴器或其它非刚性联轴器。减速机的安装误差不得大于所用联轴器的允许值。减速机安装调试找正后，必须将地脚螺栓固牢于基础或底座上，减速机安装后用手转动输入轴或电机风扇端时必须灵活，不得有卡滞现象。

(2) 减速机的润滑

本系列减速机只采用油池润滑。

润滑油规定按输入轴转速，输入功率和速比选择中极压工业齿轮油(GB5903—86)的牌号。

输入轴转速(r/min)	输入功率(KW)	速比	
		1<10:1	1>10:1
>1000	<15	120	150
	≥15~55	150	220
	≥55	220	220
>1000~1500	<7.5	100	120
	≥7.5~37	120	150
	≥37	150	220

油池润滑的油面高度，规定当减速机静止时，油面控制在视油镜的中间偏上位置即可。

润滑油的更换期：新减速机(或新更换的齿轮)第一次使用，运转10~15天后，更换一次润滑油，在正常情况下，每天24小时连续工作的减速机，不超过三个月更换一次润滑油，每天工作10小时以下的减速机，不超过六个月更换一次润滑油。

当减速机连续停机超过24小时，再启动时，应空负荷运转，待齿轮和轴承充分润滑正常后，方可带负荷运转。

(3) 负荷试车

减速机在安装后正常生产前必须进行负荷试车。负荷试车前先空运转2小时，空运转正常时方能开始负荷试车。条件允许时，应按以下四个步骤逐步加载：

第一阶段为额定负荷的25%，第二阶段为50%，第三阶段为75%，第四阶段为100%

第一阶段运转时间以油温平衡后1小时为准，但总运转时间不得少于2小时。一般情况下，最高油温不行超过80℃，机体温升不得超过45℃。若现场不能逐步加载试车时，最少必须空运转2小时及满负荷运转4小时。试车时应经常注意运转情况，检查轴承发热程度，噪音和漏油等现象。

(4)维护保养

在工作过程中，当发现油温显著升高且超过80℃，或出现异常噪音等现象，应停机检查原应，排除故障后在使用。

用户应有合理的维护保养制度，对运转情况和在检查中发现的问题，应做详细记录。

对于露天工作放置，或长期停机放置的减速机，须采用防锈措施。

在运输吊装过程中，应平稳起升，缓放，以保证件速器不受损伤。

Appendix 1:INSTALLATION,LUBRICATION AND MAINTENANCE FOR SPEED REDUCERS

(1) Installation

Elastic coupling, tooth coupling or other non–righd coupling shall be used to connect a reducer with a motor and workingmachine. The installation deviation of the reducer shall not be more than the permitted value of the coupling used. After installing, commissioning and aligning a reducer, you must fix the foot bolts firmly on the foundation or base frame. The reducer shall be so installed that after the installation, the input shaft can rotate smoothly but not seize when one rotates itby hand.

(2) Lubrication

There are two lubricating ways, i.e. oil–bath and circulation one. For a reducer working in a high ambient temperature,with high power and speed or working continuously, one shall use circulation lubrication as far as possible, so as to reduceoit temperature and give full play to the bearing capability of the reducer.

We produce reducers by assuming oil–bath lubrication way, if you need circulation lubrication, you can modify and supplement that by yourself or specify that at ordering so that we can provide oil–circulation unit. When the reducer's working ambient temperature is low, one shall take measures to maintain the oil temperature to be more than 0°C

For selecting lube, one shall select the make of middle extreme–pressure industrial gear oil (GB–5903–86)according to the input shaft speed, input power and gear ratio, etc.

Input shaft speed(r/min)	Input power(KW)	Gear ratio	
		1<10:1	1>10:1
>1000	<15	120	150
	⩾15~55	150	220
	⩾55	220	220
>1000~1500	<7.5	100	120
	⩾7.5~37	120	150
	⩾37	150	220

The oil level in the oil bath shall be so that when the reducer stops, the oil level control is at a point a little higher than thecenter of the two graduations of oil leveler.

Interval for replacing lube: for a new reducer (or a newly–replaced gear), replace lube once after running 10–15 days .Under a normal case, for a reducer running continuously 24 h/day, replace lube once in less 3 mouths. For a reducer running less than 10 h/day, replace lube once in less than 6 months.

When a reducer stops successively for more than 24 hours, it shall first run at dry lcad when restarting, and can run under toad only when the gear and bearing are fully lubricated.

(3) Trial run under load

After installation and before being put into normal production, a reducer must pass trial run under lcad. Before that, it shall have dry run for 2 hours. Only when the dry OK, can one start the trial run under lcad. One shall lcad it gradually by following the 4 steps in the follows if available:

First phase is to use 25%, the 2'd phase 75% the 3'd phase 75%, and the4'h phase is to use 100% rated load.

For the first phase, the running time will be governed by 1 h after oil temperature becomes balanced, but the total running time shall not be less than 2h. Generally, the maximum oil temperature shall not be more than 80–C, and the temperature one shall dry run at least 2h and run at full lcad for at least 4h. During the test run, one shall frequently pay attention to the running situation, check the heating up of the bearing, noise and oil leakage.

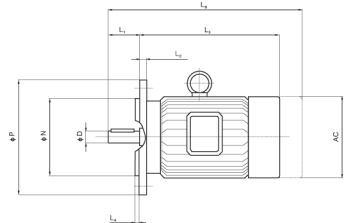
附录2-减速机的故障原因与排除

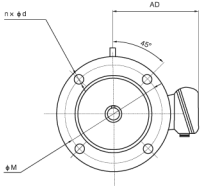
故障内容	可能原因	排除方法
无负载状态下，电机不转	停电	检查电源，询问电力公司
	连接线断裂	检查接线
	开关接触不良	修理或更换
	电机线圈断裂	送专业工厂修理
	三相电机接单相电压	确认电压及接线方式
	单相电机未接电容器	连接电容器、
	单相电机起动器动作不良	送专业工厂修理
	齿轮、轴心及轴承损坏	送专业工厂修理
负载时，电机不转	电压过低	检查电源线是否过长或过细
	齿轮损换	送专业工厂修理
	超负载运转	减少负荷
异常发热	超负载运转	减少负荷
	起动、停止过多	减少使用频率
	轴承磨损	修理或更换
	电压过高或过低	确认电压是否正常
噪音太大	声音大且持续：轴承损坏，齿轮磨损	送专业工厂修理
	偶尔声音大：齿轮损伤。有异物卡住	与用户服务机构联系
振动太大	齿轮、轴承磨损	送专业工厂修理
	固定不良，螺丝松动	重新销紧
异常的不稳定的运转噪声	油已污染或油量不足	检查油颜色、浓度、油位
漏油 -在电机法兰处 -在电机油封处 -在减速机法兰处 -在输出部分的油封处	螺丝松动	重新锁紧
	密封圈损坏	替换之与用户服务机构联系
通气塞处漏油	油量太多	校正油量
	通气塞安装不正确	正确安装通气塞
	频繁冷气动(油产生泡沫)或油位太高	将通气塞换成排气阀
电机转动时输出轴不转	减速机轴键连接破坏	送专业工厂修理

APPENDIX 2:THE CAUSE FOR BREAKDOWN AND SETTLEMENT OF REDUCER

Breakdown	Possible cause	The way of settlement
The motor does not run in case of no lcad	Power off	Check power, consult with power company
	Connecting wire break	Check wire
	The switch does not contact	Repair or replace
	The motor coil break	Repair it in special factory
	3 phase motor connect single phase voltage	Connect voltage and connecting ways
	Single phase motor does not connect condenser	Connect condenser
	Single motor's starter does work well	Repair it in special factory
	Gear. axis and bearing are damaged	Repair it in special factory
The motor does not run in case of loading	Voltage is too low	Check to see if the wire is too long too thin
	Gear is damaged	Repair it in special factory
	Work with overload	Discharge lcad
Very hot	Work with overload	Discharge lcad
	Start and stop too many	Reduce using frequency
	Bearing is damaged	Repair or replace
	Voltage is too high or too low	Confirm to see if the voltage is normal
Loud noise	If the noise is loud and continuous, the bearing is damaged or the gear damaged	Repair it in special factory
	If the noise is lcad occasionally, the gear must be damaged or something else block	Contact with the service institution
Severe vibration	Gear or bearing is worn out	Repair it in special factory
	Screw is loose	Re–lock
Abnormal, unsteady, running noise	The oil is contaminated or short of	Check the color, density and level of oil
Leakage at flange and gasket	The screw is lose	Re–lock
	The gasket is damaged	Replace it and contact service insttitution
Leakage at ventilating plug	The oil is too much	Correct the oil amount
	The plug is not well installed	Install it properly
	Cold start too often (the oil produce foam) oil level is too high	Change the plug with ventilating valve
The output shaft does not move when the motor work	The connection between shaft and key is damaged	Repair it in special factory

附录3-电机参数及安装尺寸
Appendix 3: alotor parameters and mounting dimensions





机型号 model	级数 NO.of pole	AC	AD	d	D	L_1	L_2	L_3	L_4	L_5	M	N	P
63	4	144	134	8	10	23	9	186	3.5	301	115	95	95
71M	2~6	145	110	10	14	30	9	225	3.5	347	130	110	110
80M	2~6	166	145	12	19	40	10	245	3.5	372	165	130	130
90S	2~6	180	150	12	24	50	10	260	3.5	439	165	130	130
90L	2~6	180	150	15	24	50	10	285	3.5	464	165	130	130
100L	2~8	175	175	15	28	60	11	325	4	498	215	180	180
112M	2~8	185	185	15	28	60	11	340	4	520	215	180	180
132S	2~8	205	205	15	38	80	12	385	4	665	265	230	230
132M	2~8	205	205	15	38	80	12	425	4	705	265	230	230
160M	2~8	255	255	19	42	110	15	490	5	850	300	250	250
160L	2~8	255	255	19	42	110	15	535	5		300	250	250
180M	2~8	275	275	19	48	110	18	560	5		300	250	250
180L	2~8	275	275	19	48	110	18	600	5		300	250	250
200L	2~8	305	305	19	55	110	20	665	5		350	300	300
225S	4~8	325	325	19	60	140	20	680	5		400	350	350
225M	4~8	325	325	19	60	140	20	705	5		400	350	350
250M	4~8	380	380	19	65	140	22	790	5		500	450	450
280S	4~8	410	410	19	75	140	22	835	5		500	450	450
280M	4~8	410	410	19	75	140	22	885	5		500	450	450

注：L_5为制动电机尺寸
Note:L_5 is the dimensions of brake mortor

机型号 model	功率 power
631-4	0.12
632.4	0.18
711-4	0.25
712-4	0.37
80M1-4	0.55
80M2-4	0.75

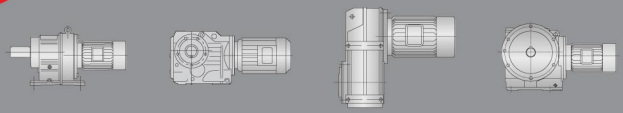
机型号 model	功率 power
90S-4	1.1
90L-4	1.5
100L1-4	2.2
100L2-4	3
112M-4	4
132S-4	5.5

机型号 model	功率 power
132M-4	7.5
160M-4	11
160L-4	15
180M-4	18.5
180L-4	22
200L-4	30

机型号 model	功率 power
225S-4	37
225M-4	45
250M-4	55
280S-4	75
280M-4	90

巨能 JN

减速机选型手册
Reducer Selection



上海巨能减速机械有限公司
SHANGHAI JUNENG REDLICER MECHANISM CO.,LTD

HELICAL GEAR REDUCER
斜齿轮硬齿面减速机

R斜齿轮减速机特点：

- 小偏置输出,结构紧凑,最大限度利用箱体空间,二级、三级在同一箱体内。
- 采用整体式铸造箱体,箱体结构刚度好易于提高轴的强度和轴承寿命。
- 安装方式:底座式安装,法兰有大小法兰易于选择。
- 实心轴输出,平均效率星二级96％、三级94％、组合平均效率85％。
- 减速比：基本型二级5-24.8，三级27.2-264，组合可达18125
- 基本型二级输入输出旋转方向相同，三级相反，组合时另行咨询。

PARALLEL SHAFT HELICAL GEAR REDUCER
平行轴斜齿轮减速机

F斜齿轮减速机特点：

- 平行输出、结构紧凑、传递扭矩大、工作平稳、噪音低、寿命长。
- 安装方式：底座安装、法兰安装、扭力臂安装。
- 减速比：基本型二级4.3-25.3，三级28.2-273，组合至18509。
- 基本型二级输入输出旋转方向相同，三级相反；组合时另咨询。
- 输出方式：空心轴输出或实心轴输出。
- 平均效率：二级96％、三级94％、F / R平均效率85％。

WORM REDUCER
圆柱蜗杆减速机

S系列斜齿轮-蜗轮减速机特点：

- 斜齿轮和蜗轮组合，结构紧凑，减速比大。
- 平均效率：减速比23.8-67.8是77％；73.7-389是62％；
- 蜗杆旋向：左旋，组合时另咨询。

HELICAL-BEVEL GEAR REDUCER

弧齿锥齿轮减速机

K斜齿–螺旋锥齿轮减速机特点：

- 垂直输出、结构紧凑、硬齿面传递扭矩大、高精度的齿轮保证了工作平稳、噪音低、寿命长。
- 安装方式：底座安装、法兰安装、扭力臂安装、小法兰安装。
- 输入方法：电机直联、电机皮带联接或输入轴、联接法兰输入。
- 输出方式：空心轴输出或实心轴输出，平均效率为94%。
- 减速比：基本型8.1–191，组合至13459。

BEVEL GEAR REDUCER

弧齿锥齿轮转向器

系列螺旋转向箱特点：

- T系列一级螺旋锥齿轮传动箱，标准化，多品种，速比1:1、1.5:1、2:1、2.5:1、3:1、4:1、5:1、全部为实际传动化。平均效率98%。
- 有单轴、双横轴、单纵轴、双纵轴可选。
- 螺旋锥齿轮可以正反运转，低速或高速传动平稳，而且噪声低，振动小，承受力大。
- 当速比不为1:1时，横轴输入、纵轴输出为减速，纵轴输入、横轴输出为增速。

MIDGET REDUCER

微型减速器

WB微型减速器特点

- 减速比大、效率高。本系列减速单级减速比有9–87,双级减速比有121–1849,若采用三级减速，其减速比更大，机械效率达90%以上。
- 由于采用行星传动结构。输入轴与输出轴在同一轴心线上，使机型尽可能获得最小尺寸，故结构紧凑、体积微小、重量极轻。
- 由于采用滚动接触，主要零件采用了高级铬钢Gcr并经淬火处理，硬度达HRc58–65。所以经久耐用，使用可靠寿命长。
- 本系列减速器具有普通减速器的一切特点外，由于采用润滑脂润滑，不易漏油，同时实现了根据用户需要可在任何位置，任何角度方向安装使用。

The Network of Marketing:
营销网络



上海巨能以优质的服务在全国范围赢得了广大客户。
为了更有效更快捷地为客户服务竭诚邀您诚意加盟上海巨能。
Shanghaijuneng which is manufactured by Shanghaijuneng Electricity Supplying Stationgainedthe favors from most customers.
It order to bring you more convenience welcome you to join in Shanghaijuneng Electricity Supplying Station.

REDUCER SELECTION
CONTENTS: 减速机选型目录