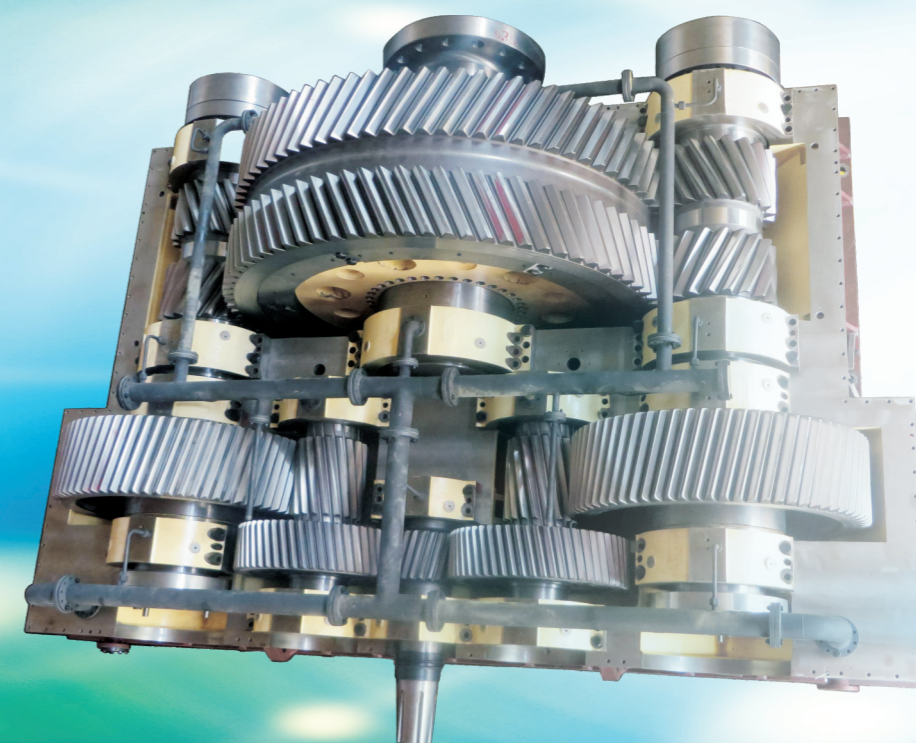


JST系列中心传动磨机减速机

JST SERIES REDUCTION GEARS FOR CENTRAL DRIVEN MILLS



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CHONGQING GEARBOX CO.,LTD

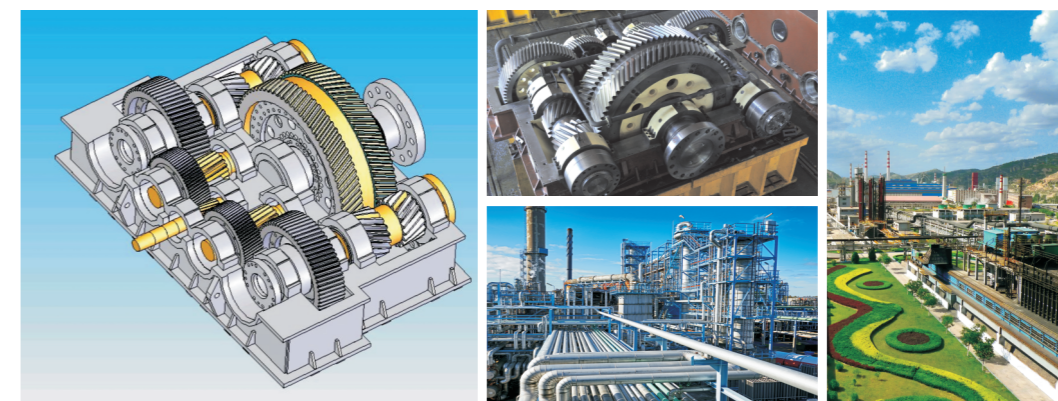
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GEARING INTERDEPENDENCE MOVING FUTURE

JST系列中心传动磨机减速机

Jst series reduction gears for central driven mills

JST系列减速机是重齿公司集齿轮传动技术特别是三十多年来开发设计超过三千台JS系列大型高精度硬齿面、重载齿轮传动装置产品设计、制造成功经验，博采国外磨机减速机技术之长，开发设计的又一具有自主知识产权的大功率中心传动装置，实用新型专利号为ZL200420060980.6，主要用于传动比要求在55~70:1范围内的传动装置。

By absorbing advanced foreign manufacturing technology, JST-series Mill Reducer is developed as the high power central driving unit with independent intellectual property (Utility Model patent, No. ZL200420060980.6), depending on above 30-year successful design and manufacturing experiences of 3000 sets of JS-series big-sized high precision case hardened heavy-duty gear units. The reducers are mainly applied to transmission units with required ratio 55~70:1.





技术特点 Technical Features

- ★ JST系列中心传动磨机减速机由主减速机、慢速驱动装置、膜片联轴器和稀油润滑站及多路温度巡检仪等辅助系统构成。

JST Series Reduction Gears for Central Driven mills consists of the Main Reduction Gears (a) Low Speed driven System, (a) Film coupling(a) Lube-oil Station(A) multi-path Temperature Periodic Indicator, and etc..

- ★ 主减速机为平行轴渐开线圆柱齿轮传动装置。采用同轴分流、扭力轴均载和调同步技术，结构紧凑、尺寸小、重量轻。

The Main Reduction Gear is involute cylindrical gear driving device with its parallel shaft. Owing to a layout of power shunting and synchronous transmission gear system which can adjust the load of each gear, it has the features of compact structure, small size and light weight.

- ★ 减速机所有传动齿轮均采用高级合金渗碳钢制造。齿轮渗碳、淬火、磨齿，具有很高的齿轮精度和负荷容量。

All driving gears of the reducer are made of high-grade alloy case-hardened steel. The gear has been case hardened and ground to obtain high precision and loading capacity.

- ★ 输出级采用人字齿轮，具有更高的承载能力。

Herringbone gear is applied for the output stage to get higher load carrying capacity.

- ★ 采用多自由度的薄壁偏心滑动轴承，可方便进行安装、调整，保证齿轮的啮合精度。

Thin-wall sliding bearings and eccentric sliding bearings with multi-degree of freedom are used, which facilitates the installation and adjustment so as to ensure the accuracy of gear engagement.

- ★ 采用焊接箱体，外形简洁美观。

The housing of reduction gear is welded and its appearance is simple and beautiful.

- ★ 主要参数采用优化设计，零件结构标准化、尺寸系列化、组件模块化，零件通用，互换程度高。

Its main parameters have been obtained by means of optimized design. In addition, this Reduction gears device also bears the features of.

- . Standardization in component structure;
- . Seriation in size;
- . Packages are all in modules;
- . Compatability and high degree of exchange ability for all components.

- ★ 主要辅助系统—慢速驱动减速机尺寸小、重量轻、标准化程度高。

The major auxiliary system ---- low speed driving gear---- has been designed for small size, light weight and in the way of high degree in standardization..

- ★ 采用膜片联轴器有效解决磨机与主机之间的不同轴度误差，并具有良好的缓冲、隔振性能。

Such diaphragm coupling is used as to effectively solve the co-axiality error between mill and main reduction gear, and is provided with good buffer, vibration isolation.

- ★ 独立式油站配备有两台齿轮油泵，互为备用以确保润滑系统的可靠性。完善的滑油压力，温度监测及报警系统提供了充分的设备安全保障手段。滑油加热系统可满足在高寒地带的的使用要求。

Independent diluted oil lubricating station is equipped with 2 sets gear pumps which can be reserved each other to ensure the reliability for lubricating system. In order to ensure the safety for equipments, good monitoring and alarming system is used for lubrication oil pressure, temperature. Lubrication oil heating system can ensure the operation in the high-cold lands.

- ★ 多路温度巡检变送器采用16路端面热电阻和先进的转换电路系统，由高亮度LED数码显示主减速机轴承序号和温度值。同时可向中控室计算机提供4~20mA标准电信号及报警系统所需的开关量信号。

16 channel transverse thermal resistors and advanced change-over circuit are used for multi-path temperature periodic indication. Bearings number and temperature value for main reduction gear are displayed by high light LED digital indicator. The computer's controlling system is provided with 4-20mA standard signal and alarming systems's comparator is provided with located swithching signal.

- ★ JST系列中心传动减速机性能先进、可靠性高，可广泛用于水泥行业的原料磨、水泥磨和冶金、矿山等行业。同时也可用于榨糖行业等。

With the features of advanced performance, high reliability. JST Series Reduction Gears for Central Driven Mill can be widely used for the raw cement mills in the fields of building materials, metallurgy line as well as sugar industry, etc.

- ★ 可选配测振仪或在线监测系统，对产品运行状态进行监测和预判。

Vibration measuring instrument or online monitoring measuring system is optional to monitor the operation condition and fault prediction in real time.

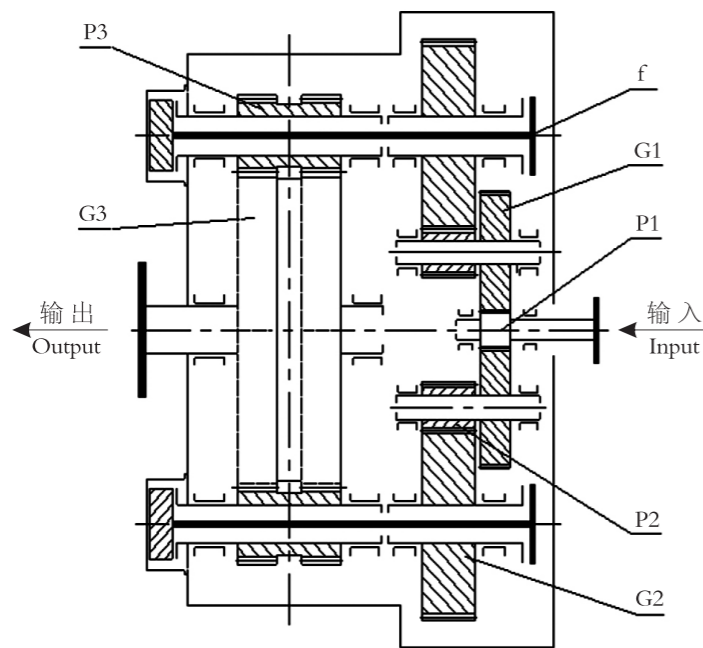


主减速机传动原理

The principle of main reduction gears

JST系列减速机为水平同心传动、功率双分流、扭力轴均载的三级齿轮传动装置。其传动原理见下图:

JST-series Mill Reducer is designed as three-stage gear driving unit with features of horizontally coaxial-driving, power split and even loading of torsion shaft. Function diagram shown below:



P1: 一级小齿轮 1st pinion P2: 二级小齿轮 2nd pinion P3: 三级小齿轮 3rd pinion
 G1: 一级大齿轮 1st gearwheel G2: 二级大齿轮 2nd gearwheel G3: 三级小齿轮 3rd gearwheel
 f: 扭力轴 torsion shaft



主减速机主要技术参数

Main technical parameters

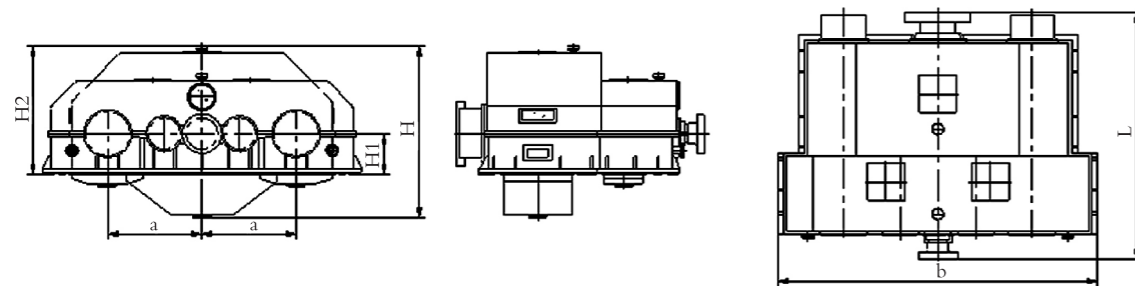
型号 Size	传递功率 (KW) Rating	输入转速 (r/min) Input Speed	输出转速 (r/min) Output Speed
JST130-A	2800	890 990	14.0 ~ 18.0
JST130-B	3150		
JST140-A	3250		
JST140-B	3550		
JST150-A	3800	750 890 990	
JST150-B	4000		
JST150-C	4250		
JST160-A	4500		
JST160-B	4800		
JST160-C	5000		
JST170-A	5500		
JST170-B	6000		
JST170-C	6500		
JST180-A	7000		
JST180-B	7500		
JST180-C	8000		

注: 输出转速可按用户的不同要求进行调整, 通常输出转速差控制在 ± 0.15 r/min。

Note: Output speed can be adjusted according to customer's requests, which normally a difference within 0.15 r/min.



主减速机外形尺寸 Dimension

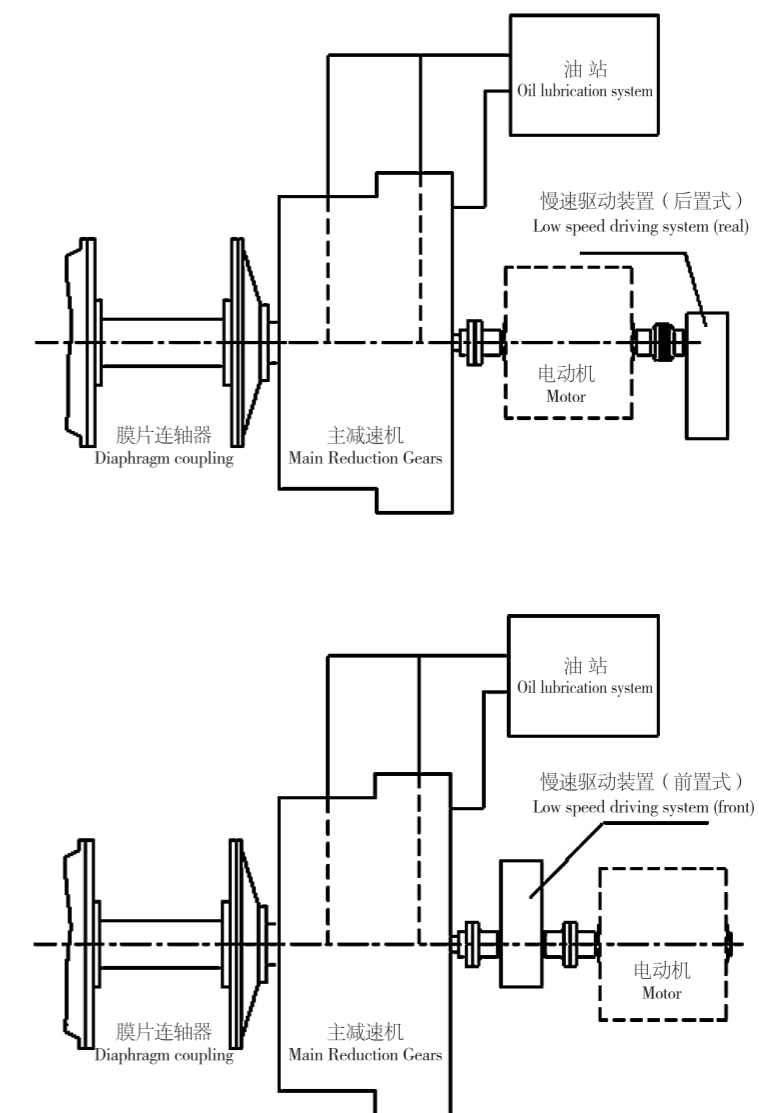


型号 Size	外形尺寸 Outline Dimensions(mm)						质量(t) Weight
	a	b	L	H	H1	H2	
JST130-A	1300	4430	3750	2530	750	2005	52
JST130-B							54
JST140-A	1400	4790	3725	2650	800	2155	60
JST140-B							62
JST150-A	1500	5090	3930	2745	650	2040	67
JST150-B							69
JST150-C							71
JST160-A	1600	5420	4230	2895	650	2125	84
JST160-B							85
JST160-C							87
JST170-A	1700	5760	4640	3140	750	2350	101
JST170-B							103
JST170-C							105
JST180-A	1750	6000	4765	3345	750	2470	128
JST180-B							130
JST180-C							132

注：外形尺寸最终以提供的基础安装图为准

Note: finally dimension based on supplied foundation diagram

系统布置型式 System arrangement type





各部件质量 (t)

The weight of central driven mills (t)

型号 Size	主减速机 Main reduction gear	油站 Oil lubrication system	慢速驱动装置 Low speed driving system	膜片联轴器 Diaphragm coupling	总重 Overall weight
JST130-A	52	3.5 (400L/min)	4	9.5	69
JST130-B	54	3.5 (400L/min)	4	10	71.5
JST140-A	60	3.5 (500L/min)	4	11	78.5
JST140-B	62	3.5 (500L/min)	4	12	81.5
JST150-A	67	5.5 (630L/min)	6	13.5	92
JST150-B	69	5.5 (630L/min)	6	14	94.5
JST150-C	71	5.5 (630L/min)	6	14.5	97
JST160-A	84	5.5 (630L/min)	6	15	110.5
JST160-B	85	5.5 (630L/min)	6	15.5	112
JST160-C	87	5.5 (630L/min)	6	16	114.5
JST170-A	101	5.5 (800L/min)	8	18	132.5
JST170-B	103	5.5 (800L/min)	8	19	135.5
JST170-C	105	5.5 (800L/min)	8	20	138.5
JST180-A	128	7 (1000L/min)	12	25	172
JST180-B	130	7 (1000L/min)	12	26	175
JST180-C	132	7 (1000L/min)	12	27	178

注：表中膜片联轴器重量为标准长度3m对应的重量。
表中重量偏差为±5%。

Note: Weight of diaphragm coupling specified in the table refers to that for standard length of 3m.
An error within 5% is permissible for weight value specified in the table.

选型与订货说明

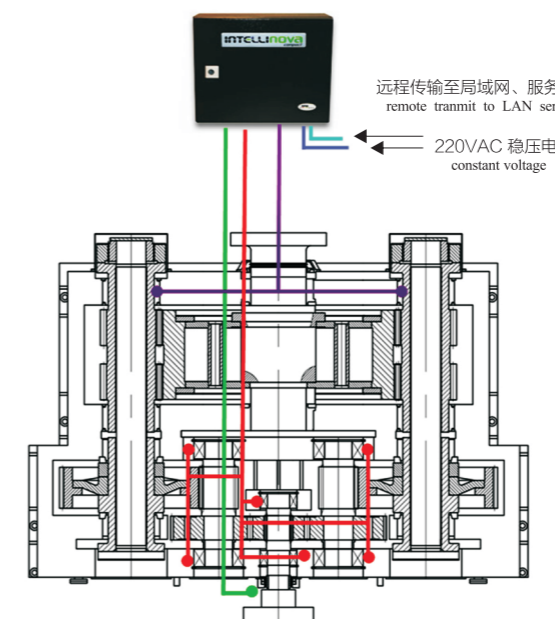
Type selection and order

根据主电机的额定功率、转速和磨机的转速要求选择主减速机的型号。具体见JST系列主要技术参数。
订货时请注明系统布置型式,推荐采用后置式慢驱。
供货范围还包括安装地脚螺栓和调整垫铁。
根据用户的不同要求,可特殊订货。

Reduction gear type is selected based on the motor rated power, and the speed of mill and motor. Please refer to the main technical parameters of reduction gear.
While ordering, please state the system Arrangement type. Astern driving for low speed driving gear is recommended.
Mounting anchor and adjustment washer are included in supply scope.
Special order is acceptable at different

在线监测系统

Online monitoring measuring system



在线监测系统通过冲击脉冲和振动传感器,利用监控模块实时采集数据上传到服务器,通过网络化诊断软件实时监控产品运行状态与预知维修,可提前3~6月诊断滚动轴承(早期点蚀、剥落、磨损、安装质量、损伤程度及润滑等)、齿轮(齿轮偏载、点蚀、剥落、磨损、断齿等)及设备不平衡、不对中等故障问题,是大型齿轮箱后服务传动市场发展的重要方向。

The online monitoring measuring system, by means of impact pulse and vibration sensors, collects data in real time and uploads to the server via the monitoring modules. The data will be analyzed through internet software to monitor the real time operation condition, and give prediction for maintenance if necessary. Normally the fault for rolling bearings, such as early pitting, peeling, wearing, installation quality, degree of damage, lubrication etc., and that for gears, such as uneven loading, pitting, peeling, wearing, tooth broken etc., and unbalance and misalignment for equipment, etc. can be diagnosed ahead of 3-6 months. This is prospective for the development of large-sized gearbox after sales service market.

● Duotech 传感器 Duotech Sensors
● SLD 振动传感器 SLD vibration sensor
● 转速传感器 Speed sensor