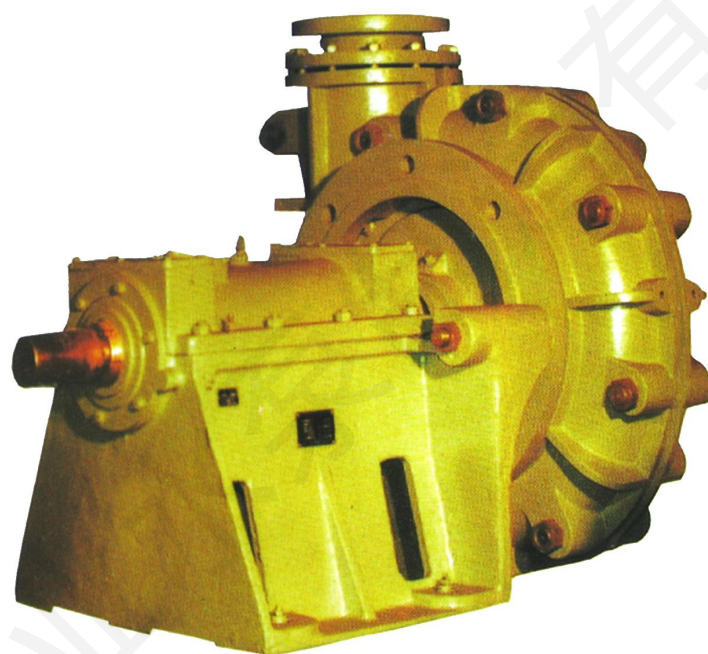


ZGB (P)

系列渣浆泵



保定工业水泵制造有限公司

我国最新一代渣浆泵产品

Up-to-date Generation Slurry Pump in China

为了满足电力、冶金、煤碳等行业发展的需要,针对除灰除渣及渣浆输送工况的特点,在几十年渣浆泵设计制造经验基础上,广泛吸取国内外先进技术和研制成果,我厂开发了我国最新一代大流量、高扬程、可多级串联的ZGB(P)系列渣浆泵。该系列产品的主要技术特点如下:

- 采用现代CAD设计方法,水力性能优良,效率高和磨损率低;
- 流道宽敞,抗堵塞性能好,汽蚀性能优越;
- 采用付叶轮加填料组合式密封和机械密封,确保渣浆无泄漏;
- 可靠性设计,保证了整机平均无故障工作时间(MTBF)大幅度提高;
- 采用稀油润滑制轴承,合理设置润滑与冷却系统,保证轴承在低温状态下运行;
- 过流部件采用特殊材质,耐磨耐腐蚀性能好;
- 经特殊处理,用于海水除灰及海水和盐雾电化学腐蚀工况;
- 在允许的压力范围内可以多级串联使用,其允许最大工作压力为3.6MPa。

该系列渣浆泵产品具有结构式合理、效率高、运行可靠和维修方便等优点,广泛适用于电力、冶金、矿山、煤炭、建材、化工等工业部门输送磨蚀性或腐蚀性渣浆,特别是电厂灰渣。

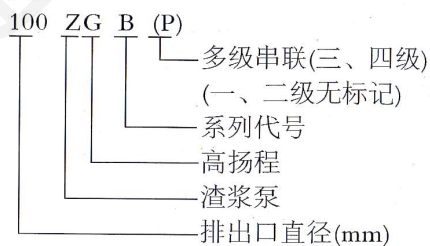
In order to meet the requirements on the development of the electric power, metallurgy and coal industries, our works has designed and developed Series ZGB(P)Up-to-date Generation Slurry Pump with large capacity, high head, multi-stages in series to remove ash & sludge and to deliver liquid-solids mixture, based on the experience of slurry pump design and manufacture for many years, and abstracting the research results of advanced technology from home and abroad. The main technical features of this pump are as follows:

- CAD modern design, super hydraulic performance, high efficiency and lower abrasion rate;
- Wide passage, non-clogging and good performance of NPSH;
- Expeller seal combined with packing seal and mechanical seal have been adopted to guarantee the slurry from leakage;
- Reliability design ensures long MTBF (mean time between events);
- The metric bearing with oil lubrication, reasonable lubricating and cooling systems ensure the bearing to be operated under the low temperature;
- The materials of wet parts have the good performance of anti-wearing and anticorrosion;
- The pump can be used for seawater ash-removing to prevent it from the corrosion of seawater, salt and mist, and electrochemical corrosion;
- The pump can be operated in series with multi-stage within permissible pressure. The permissible maximum working pressure is 3.6MPa.

The series of pump has the advantages of reasonable construction, high efficiency, reliable operation and easy maintenance. It can be widely used for handling the mixture containing abrasive and corrosive solids in electric power, metallurgy, mine, coal, constructional material and chemical industry departments, especially for removing ash and sludge in electric power station.

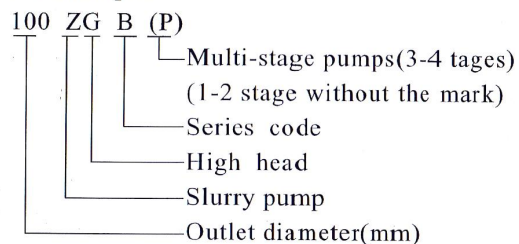
型号意义:

例如:



TYPE NOTATION:

For example:



ZGB(P)系列渣浆泵为卧式、单级、单吸、悬臂、双泵壳、离心式渣浆泵。

相同口径的ZGB和ZGBP型渣浆泵的过流部件可以互换,外形安装尺寸完全相同。ZGB(P)系列渣浆泵的传动部分采用水平中开式稀油润滑托架,并设有内外两组水冷却系统。

必要时可加冷却水。预留的冷却水接口、冷却水压力参考表1。

ZGB(P)系列渣浆泵的轴封型式有两种:付叶轮加填料组合式密封和机械密封。

凡串联渣浆泵(二级或二级以上)建议采用有高压轴封水的机械密封。单级或串联一级采用付叶轮加填料组合式密封。

各种轴封型式的轴封水压、水量如下:

1.轴封水压

·对于单级(或串联一级)采用填料加付叶轮组合式密封,轴封水压力一般为0.2~0.3MPa。

·对于多级串联采用填料加付叶轮组合式密封,二级和二级以上轴封水最低压力一般为:

$$P_n = \sum_{i=1}^n H_i + 0.7H_n, \text{ 其中 } n > 2; H_i \text{ 为第 } i \text{ 级泵扬程; } H_n \text{ 为第 } n \text{ 级泵扬程。}$$

·对采用机械密封,各级泵的轴封水压力一般要求比泵出口压力大0.1MPa。

2.轴封水量(见表1)

The series ZGB(P) slurry pump is of horizontal, single-stage, single-suction, cantilever, double-casing, centrifugal slurry pump. The pump rotates in clockwise viewed from the drive end.

The wet parts of ZGB and ZGBP pump at the same outlet diameter can be interchangeable. Their outline installation dimensions are one and the same. For the drive part of the series ZGB(P) slurry pump, the horizontal split frame with oil lubrication and two sets of water cooling systems inside and outside has been adopted. If necessary, cooling water can be supplied. The prepared joint for cooling water and the pressure of the cooling water can be seen in table 1.

Two kinds of shaft seal--expeller seal combined with packing and mechanical seal have been used for series ZGB(P) slurry pump.

The mechanical seal supplied with high pressure sealing water is recommended when the slurry pump is operated in series (two stages and above two stages), and the expeller seal combined with packing is used in single-stage pump.

The water pressure and amount of all kinds of the shaft seal is as follows:

1) Sealing water pressure

·For single-stage pump with the expeller seal combined with packing, the water pressure of the shaft seal is 0.2-0.3 MPa.

·For the multi-stage (two and above two stages) in series operation with the expeller seal combined with packing, the sealing water pressure should be:

$$\text{The lowest sealing water pressure of } n \text{ stage} = \sum_{i=1}^n H_i + 0.7 H_n \quad \text{Where: } n > 2.$$

·For the mechanical seal, the sealing water pressure of every stage of pump is higher 0.1MPa than the pressure at the outlet of pump.

2) Sealing water pressure (see table 1)

表.1 轴封水参数表 (Table.1 Sealing Water Parameters)

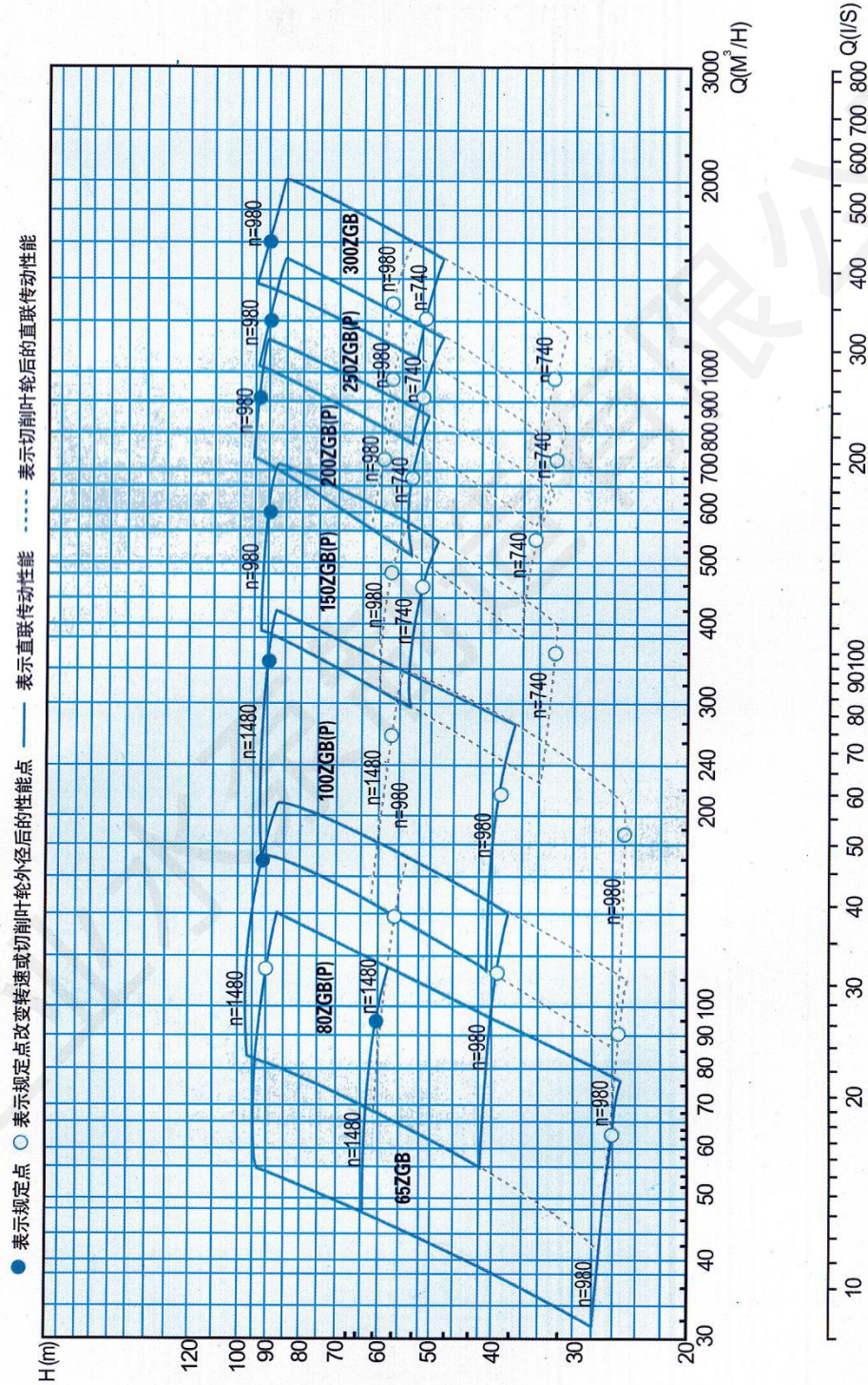
泵型号 Pump type	托架 Frame	轴封水量(l/s) Sealing water	轴封水接口 Sealing water joint	托架冷却水接口 Cooling water joint on frame	托架冷却水压 Cooling water pressure
65ZGB	320	0.5	1/4"	1/2"、3/8"	0.05~0.2MPa
80ZGB	406	0.7	1/2"	3/4"、1/2"	0.05~0.2MPa
100ZGB	406	0.7	1/2"	3/4"、1/2"	0.05~0.2MPa
80ZGBP	406A	0.7	1/2"	3/4"、1/2"	0.05~0.2MPa
100ZGBP	406A	0.7	1/2"	3/4"、1/2"	0.05~0.2MPa
150ZGB	565	1.2	1/2"	3/4"、3/4"	0.05~0.2MPa
200ZGB	565	1.2	1/2"	3/4"、3/4"	0.05~0.2MPa
150ZGBP	565A	1.2	1/2"	3/4"、3/4"	0.05~0.2MPa
200ZGBP	565A	1.2	1/2"	3/4"、3/4"	0.05~0.2MPa
250ZGB	743	1.2	1"	3/4"、3/4"	0.05~0.2MPa
300ZGB	743	1.2	1"	3/4"、3/4"	0.05~0.2MPa
250ZGBP	743A	1.2	1"	3/4"、3/4"	0.05~0.2MPa

ZGB(P)型渣浆泵型谱及性能参数

Performance Chart & Parameters of Type ZGB(P) Pump

ZGB(P)型渣浆泵型谱

SELECTION CHART FOR TYPE ZGB SLURRY PUMP



ZGB(P) 型 渣 浆 泵 性 能 参 数

ZGB(P) Pump Performance Parameters

性能参数表 PERFORMANCE DHART

泵型号 PUMP TYPE	清水性能(CLEAR WATER PERFORMANCE)					轴功率 POWER ON SHAFT Pa (kw)	配套电机型号 功率/电压 MOTOR TYPE POWER/VOLT	叶轮直径 IMPELLER DIA. (mm)	泵重量 IPELLER DIA. (mm)	排出口直径 吸入口直径 OUTLET INLET (mm)
	转速 SPEED n (r/min)	流量 CAPACITY Q (l/s)	扬程 HEAD H (m)	效率 EFF. η (%)	汽蚀 余量 NPSH (m)					
65ZGB	1480	56.88	61	47.4	3.0	19.9	Y200L-4,30KW/380V	390	1850	65/80
		95.04	60	59.8	3.7	25.9	Y225M-4,45KW/380V			
		114.12	58	62.5	4.5	28.8	Y250M-4,55KW/380V			
65ZGB	980	37.8	26.7	47.4	1.3	5.8	Y160L-6,11KW/380V	390	1850	65/80
		63	26.3	59.8	1.8	7.5	Y180L-6,15KW/380V			
		75.6	25.4	62.5	2.0	8.37	Y180L-6,15KW/380V			
80ZGB(P)	1480	83.88	62.3	48.7	1.8	29.2	Y250M-4,55KW/380V	400	2500	80/100
		140.04	61.2	63	2.8	37	Y280S-4,75KW/380V			
80ZGB(P)	980	55.44	27.3	48.7	0.8	8.4	Y180L-6,15KW/380V	400	2500	80/100
		92.88	26.8	63	1.2	10.8	Y200L1-6,18.5KW/380V			
80ZGB(P)	1480	111.6	26.1	66.1	1.5	12	Y200L1-6,18.5KW/380V	445	2500	80/100
		155.88	75.8	63	3.5	51.1	Y280S-4,75KW/380V			
80ZGB(P)	980	93.6	77.1	48.7	2.3	40.4	Y280S-4,75KW/380V	445	2500	80/100
		187.2	73.7	66.1	4.4	56.8	Y280M-4,90KW/380V			
80ZGB(P)	1480	61.92	33.8	48.7	1.0	11.7	Y200L2-6,22KW/380V	485	2500	80/100
		103.32	33.2	63	1.5	14.8	Y225M-6,30KW/380V			
80ZGB(P)	980	123.84	32.3	66.1	1.9	16.5	Y225M-6,30KW/380V	485	3000	80/100
		101.88	91.6	48.7	2.7	52.2	Y280M-4,90KW/380V			
80ZGB(P)	1480	169.92	90	63	4.1	66.1	Y315S-4,110KW/380V	485	2500	80/100
		204.12	87.5	66.1	5.2	73.7	Y315M1-4,132KW/380V			
80ZGB(P)	980	67.68	40.2	48.7	1.2	15.2	Y225M-6,30KW/380V	485	3000	80/100
		112.68	39.5	63	1.8	19.2	Y250M-6,37KW/380V			
100ZGB(P)	1480	135	38.4	66.1	2.3	21.4	Y250M-6,37KW/380V	400	3000	100/152
		168.12	58.8	57.4	1.7	46.9	Y280S-4,95KW/380V			
100ZGB(P)	980	280.08	56.4	74.4	2.4	57.8	Y280M-4,90KW/380V	400	3000	100/152
		336.24	54.5	77.9	3.8	64	Y315S-4,110KW/380V			
100ZGB(P)	1480	111.24	25.8	57.4	0.8	13.6	Y200L2-6,22KW/380V	400	3000	100/152
		185.4	24.7	74.4	1.1	16.8	Y225M-6,30KW/380V			
100ZGB(P)	980	222.48	23.9	77.9	1.7	18.6	Y225M-6,30KW/380V	400	3000	100/152

ZGB(P) 型渣浆泵性能参数

ZGB(P) Pump Performance Parameters

性能参数表 PERFORMANCE CHART

泵型号 PUMP TYPE	清水性能(CLEAR WATER PERFORMANCE)					轴功率 POWER ON SHAFT Pa (kw)	配套电机型号 功率/电压 MOTOR TYPE POWER/VOLT	叶轮直径 IMPELLER DIA. (mm)	泵重量 PELLER DIA. (mm)	排出口直径 吸入口直径 OUTLET INLET (mm)
	转速 SPEED n (r/min)	流量 CAPACITY Q (l/s)	扬程 HEAD H (m)	效率 EFF. η (%)	汽蚀 余量 NPSH (m)					
100ZGB(P)	1480	189	74.4	57.4	2.1	66.7	Y315S-4,110KW/380V	450	3000	100/152
		315	71.4	74.4	3.1	82.3	Y315M1-4,132KW/380V			
		378	68.9	77.9	4.9	91	Y315M2-4,160KW/380V			
100ZGB(P)	980	125.28	32.6	57.4	1.1	19.4	Y225M-6,30KW/380V	450	3000	100/152
		208.44	31.3	74.4	1.7	23.9	Y250M-6,37KW/380V			
		250.2	30.2	77.9	2.1	26.4	Y280S-6,45KW/380V			
100ZGB(P)	1480	209.28	91.8	57.4	2.6	91.4	Y315M2-4,160KW/380V	500	3000	100/152
		349.92	88.2	74.4	3.8	113	Y315L1-4,185KW/380V			
		420.12	85.1	77.9	6.0	124.9	Y315L2-4,200KW/380V			
100ZGB(P)	980	138.96	40.3	57.4	1.2	26.6	Y280S-6,45KW/380V	500	3000	100/152
		231.84	38.7	74.4	1.7	32.8	Y280M-6,55KW/380V			
		278.28	37.3	77.9	2.7	36.3	Y280M-6,55KW/380V			
150ZGB(P)	980	304.56	65.2	53.3	1.1	101.5	Y355M1-6,160KW/380V	630	3450	150/200
		507.6	63.4	70	1.5	125.2	Y355M3-6,200KW/380V			
		609.12	61.8	77.7	2.8	131.9	Y355L1-6,220KW/380V			
150ZGB(P)	740	233.28	37.2	53.3	0.6	44.3	Y355M1-8,75KW/380V	630	3450	150/200
		388.8	36.1	70	0.9	54.6	Y315M2-8,90KW/380V			
		466.56	35.2	77.7	1.6	57.6	Y315M2-8,90KW/380V			
150ZGB(P)	980	328.32	77.1	53.3	2.3	129.3	Y355L1-6,220KW/380V	685	3450	150/200
		547.2	75	70	3.0	159.7	Y355L2-6,250KW/380V			
		656.64	73	77.7	3.3	168	Y400-6,280KW/6KV			
150ZGB(P)	740	252.72	44	53.3	1.3	56.8	Y315M2-8,90KW/380V	685	3450	150/200
		421.2	42.8	70	1.7	70.1	Y315M3-8,110KW/380V			
		504	41.6	77.7	1.9	74.2	Y315M1-8,132KW/380V			
150ZGB(P)	980	360	90	53.3	2.7	165.5	Y400-6,280KW/6KV	740	3450	150/200
		601.2	87.5	70	3.5	204.7	Y400-6,315KW/6KV			
		720	85.2	77.7	3.8	215	Y400-6,355KW/6KV			
150ZGB(P)	740	272.16	51.3	53.3	1.5	71.3	Y355M1-8,132KW/380V	740	3450	150/200
		453.6	49.9	70	2.0	88.1	Y315M2-8,160KW/380V			
		544.32	48.6	77.7	2.2	92.7	Y355M2-8,160KW/380V			

ZGB(P) 型渣浆泵性能参数

ZGB(P) Pump Performance Parameters

性能参数表 PERFORMANCE CHART

泵型号 PUMP TYPE	清水性能(CLEAR WATER PERFORMANCE)					轴功率 POWER ON SHAFT Pa (kw)	配套电机型号 功率/电压 MOTOR TYPE POWER/VOLT	叶轮直径 IMPELLER DIA. (mm)	泵重量 IPELLER DIA. (mm)	排出口直径 吸入口直径 OUTLET INLET (mm)
	转速 SPEED n (r/min)	流量 CAPACITY Q (l/s)	扬程 HEAD H (m)	效率 EFF. η (%)	汽蚀 余量 NPSH (m)					
200ZGB(P)	980	466.92	70.5	63.2	2.0	141.8	Y400-6,315KW/6KV	640	4000	200/250
		778.32	69.9	73.7	4.2	210.0				
		934.2	66.6	76.3	5.0	222.0				
200ZGB(P)	740	352.44	40.2	63.2	1.1	61.0	Y355M3-8,110KW/380V	640	4000	200/250
		485.64	39.9	73.7	2.4	71.6				
		705.24	38	76.3	2.9	95.6				
200ZGB(P)	980	510.84	84.3	63.2	2.4	185.8	Y400-6,400KW/6KV	700	4000	200/250
		851.4	83.4	73.7	5.0	262.3				
		1021.68	79.6	76.3	6.0	290.2				
200ZGB(P)	740	385.56	48.1	63.2	1.4	80.0	Y315M1-8,132KW/380V	700	4000	200/250
		642.96	47.6	73.7	2.9	113.0				
		711.48	45.4	46.3	3.4	125.0				
200ZGB(P)	980	540	94.2	63.2	2.7	219.1	Y400-6,355KW/6KV	740	4000	200/250
		900	93.4	73.7	5.6	310.5				
		1080	89	76.3	6.7	342.9				
200ZGB(P)	740	407.88	53.7	63.2	1.5	94.3	Y315M2-8,160KW/380V	740	4000	200/250
		678.6	53.3	73.7	3.2	134.3				
		815.4	50.7	76.3	3.8	147.5				
250ZGB(P)	980	473.76	68.5	64.1	2.5	137.9	Y400-6,400KW/6KV	645	4500	250/300
		1045.8	66.9	77.0	4.3	247.7				
		1254.96	63.8	78.2	5.5	278.8				
250ZGB(P)	740	357.84	39.1	64.1	1.4	59.4	Y355L1-8,185KW/380V	645	4500	250/300
		789.84	38.1	77.0	2.5	106.4				
		987.52	36.4	78.2	3.1	120.1				
250ZGB(P)	980	681.12	80.6	64.1	3.0	233.2	Y400-6,355KW/6KV	700	4500	250/300
		1135.08	78.7	77.0	5.1	315.9				
		1362.24	75.2	78.2	7.1	356.7				
250ZGB(P)	740	514.44	46	64.1	1.7	100.5	Y355M2-8,180KW/380V	700	4500	250/300
		857.16	44.9	77.0	2.9	136.1				
		1027.52	42.9	78.2	4.0	153.7				

ZGB(P) 型渣浆泵性能参数

ZGB(P) Pump Performance Parameters

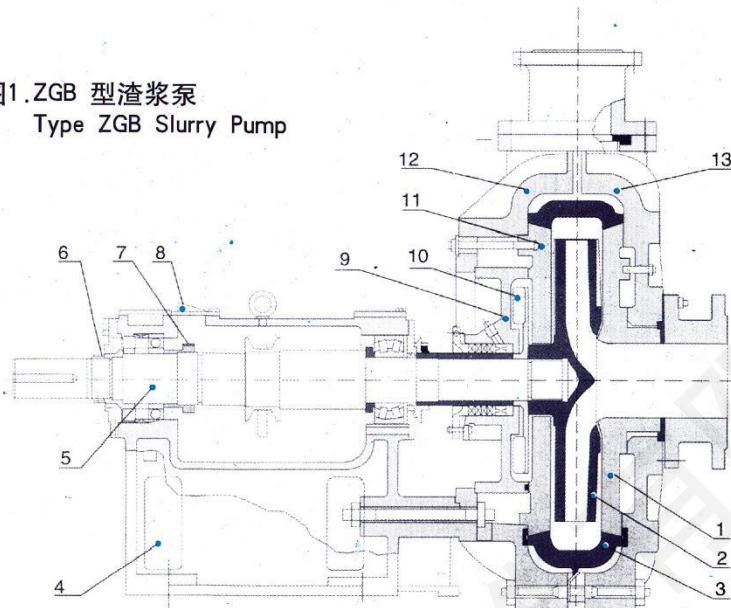
性能参数表 PERFORMANCE DHART

泵型号 PUMP TYPE	清水性能(CLEAR WATER PERFORMANCE)					轴功率 POWER ON SHAFT Pa (kw)	配套电机型号 功率/电压 MOTOR TYPE POWER/VOLT	叶轮直径 IMPELLER DIA. (mm)	泵重量 IPELLER DIA. (mm)	排出口直径 吸入口直径 OUTLET INLET (mm)
	转速 SPEED n (r/min)	流量 CAPACITY Q (l/s)	扬程 HEAD H (m)	效率 EFF. η (%)	汽蚀 余量 NPSH (m)					
250ZGB(P)	980	720	90	64.7	3.3	275.6	Y400-6,450KW/6KV	740	4500	250/300
		1199.88	88	77.0	5.7	373.4	Y450-6,560KW/6KV			
		1440	84	78.2	7.3	421.2	Y450-6,630KW/6KV			
250ZGB(P)	740	543.6	51.4	64.7	1.9	118.7	Y355L1-8,185KW/380V	740	4500	250/300
		906.12	50.2	77.0	3.3	160.9	Y400-8,250KW/6KV			
		1087.2	47.9	78.2	4.2	181.4	Y400-8,280KW/6KV			
300ZGB(P)	980	816.12	70.5	68.3	2.5	219.7	Y400-6,355KW/6KV	646	5500	300/350
		1360.08	64.9	80.0	3.6	300.5	Y450-6,500KW/6KV			
		1631.88	60.9	81.12	5.0	333.3	Y450-6,560KW/6KV			
300ZGB(P)	740	616.32	38.5	68.3	1.4	94.6	Y355M2-8,160KW/6KV	646	5500	300/350
		1027.08	37	80.0	2.1	129.4	Y355L2-8,200KW/6KV			
		1232.28	34.7	81.12	2.9	143.4	Y400-8,250KW/6KV			
300ZGB(P)	980	888.12	79.9	68.3	3.0	282.9	Y450-6,450KW/6KV	703	5500	300/350
		1479.96	76.8	80.0	4.3	386.9	Y500-6,630KW/6KV			
		1775.88	72.1	81.12	5.9	429.4	Y500-6,630KW/6KV			
300ZGB(P)	740	640.44	45.6	68.3	1.7	116.4	Y355L1-8,185KW/380V	703	5500	300/350
		1117.44	43.8	80.0	2.5	166.6	Y400-8,280KW/6KV			
		1341	41.1	81.12	3.4	184.8	Y400-8,315KW/6KV			
300ZGB(P)	980	960.12	93.4	68.3	3.5	357.6	Y450-6,560KW/6KV	740	5500	300/350
		1599.84	89.8	80.0	5.0	489.1	Y500-6,710KW/6KV			
		1919.88	84.3	81.12	6.9	542.8	Y500-6,710KW/6KV			
300ZGB(P)	740	724.68	53.3	68.3	2.0	154.0	Y400-8,250KW/6KV	760	5500	300/350
		1208.16	51.2	80.0	2.9	210.6	Y450-8,315KW/6KV			
		1449.12	48.1	81.12	3.9	233.9	Y450-8,400KW/6KV			

ZGB (P) 型渣浆泵结构及主要零件

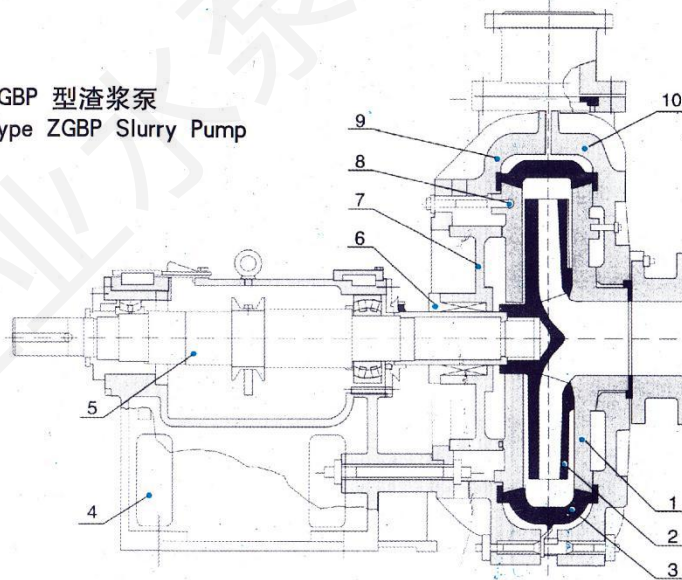
Construction & Main Parts of Type ZGB(P) Pump

图1. ZGB 型渣浆泵
Type ZGB Slurry Pump



- | | | | | | | |
|-------------------|---------------|----------|-------------------|-----------|---------------------|---------------------|
| 1. 前护板; | 2. 叶轮; | 3. 护套; | 4. 托架体; | 5. 轴; | 6. 螺母乙; | 7. 调整螺母甲; |
| Front linerinsert | Impeller | Volute | Frame body | Shaft | Adjusting screw (b) | Adjusting screw (a) |
| 8. 调整孔盖; | 9. 减压盖; | 10. 付叶轮; | 11. 后护板; | 12. 泵体; | 13. 泵盖; | |
| Adjusting cover | Expeller ring | Expeller | Back liner insert | Pump body | Pump cover | |

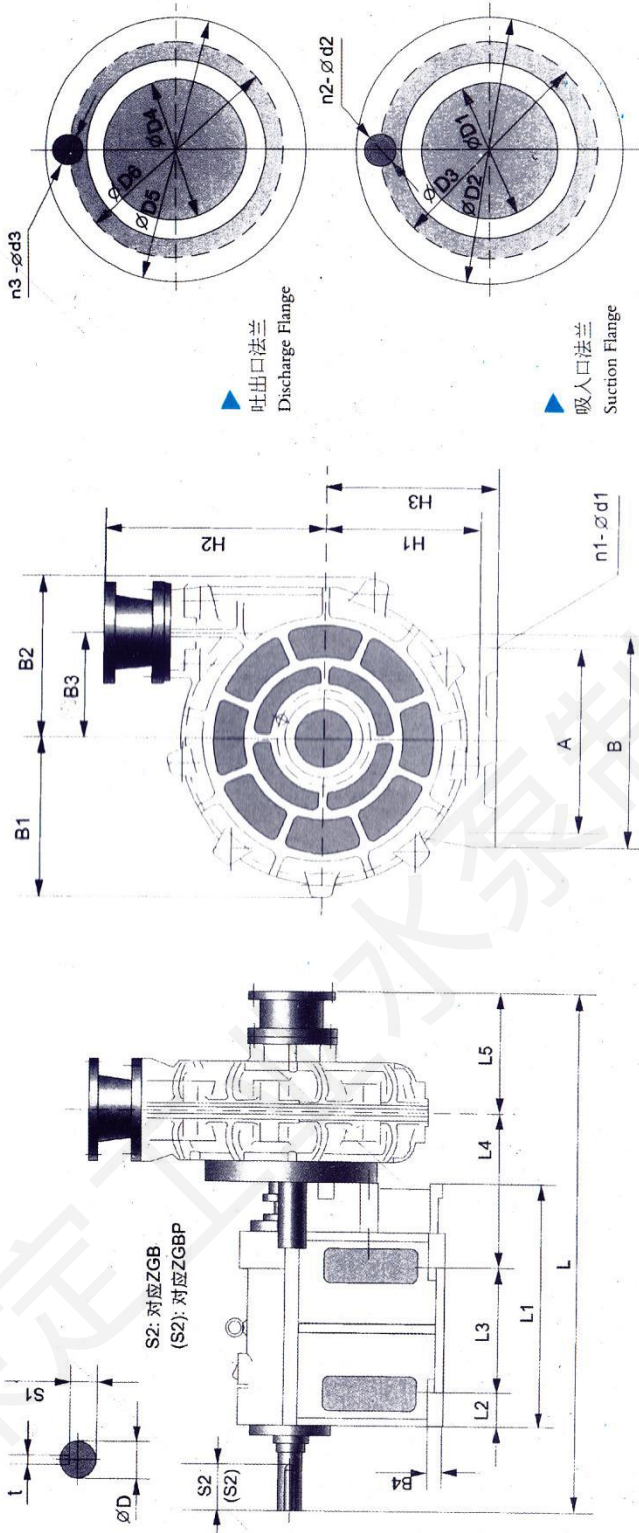
图2. ZGBP 型渣浆泵
Type ZGBP Slurry Pump



- | | | | | | |
|-------------------|-------------|-------------------|------------|------------|--|
| 1. 前护板; | 2. 叶轮; | 3. 护套; | 4. 托架体; | 5. 轴; | |
| Front linerinsert | Impeller | Volute | Frame body | Shaft | |
| 6. 机械密封; | 7. 密封箱; | 8. 后护板; | 9. 泵体; | 10. 泵盖; | |
| Mechanical seal | Sealing box | Back liner insert | Pump body | Pump cover | |

ZGB(P) 型渣浆泵外形尺寸

Outline Dimensions & List of Type ZGB(P) Pump



型号	A	B	B1	B2	B3	B4	D	D1	D2	D3	D4	D5	D6	H1	H2	H3	L	L1	L2	L3	L4	L5	n1-∅d1	n2-∅d2	n3-∅d3	S1	S2 (S2)	t	
65ZGB	432	492	352.5	377	220	45	65 ^{+0.05} _{-0.05}	80	210	168.5	65	190	149	360.5	475	415	1379.5	580	45	340	400.5	330	4-∅22	8-∅22	8-∅22	58 ^{+0.2}	150	18 ⁰	
80ZGB(P)	560	636	360	445	279	50	80 ^{+0.05} _{-0.05}	100	255	200	80	210	168.5	383	560	520	1598	725	72	440	451	296	4-∅29	8-∅22	8-∅22	71 ^{+0.2}	203	180	22 ⁰
100ZGB(P)	560	636	395	467	290	50	80 ^{+0.05} _{-0.05}	152	320	270	100	275	216	394	597	520	1718	725	72	440	467	402	4-∅29	12-∅22	8-∅26	71 ⁰	203	180	22 ⁰
150ZGB(P)	760	840	619	684	453	60	120 ^{+0.05} _{-0.05}	200	380	330	150	320	270	655	820	650	2006	1013	118	560	615	388	4-∅35	12-∅26	12-∅22	109 ^{+0.2}	200	180	32 ⁰
200ZGB(P)	760	840	675	735	460	60	120 ^{+0.05} _{-0.05}	250	425	370	200	380	330	695	880	650	2213	1013	118	560	628	579	4-∅35	12-∅26	12-∅26	109 ^{+0.2}	200	180	32 ⁰
250ZGB(P)	780	850	645	710	460	60	120 ^{+0.05} _{-0.05}	300	515	450	250	445	387.5	660.3	974	650	2160	978	128	550	628	500	4-∅40	16-∅33	16-∅30	109 ^{+0.2}	200	180	32 ⁰
300ZGB	780	850	649	766	475	60	120 ^{+0.05} _{-0.05}	350	585	514.5	300	520	451	676	883	650	2282	978	128	550	668	610	4-∅40	20-∅33	16-∅33	109 ^{+0.2}	200	32 ⁰	

一流产品 一流质量 一流服务

Super Product High Quality Good Service

订货须知

- 1、请说明是否串联使用和串联级数。如无说明，本厂将按ZGB型供货。
- 2、请注明轴封型式。若无说明，本厂将按付叶轮加填料组合式密封供货。
- 3、电机的防护等级一般为IP23，频率为50Hz。如有特殊要求，请予说明。
- 4、ZGB型只允许应用于一、二级，ZGBP型用于三、四级。

NOTICES FOR ORDERING

- 1)When ordering,it should be stated whether the pumps are used in series operation and the stage number in series.Otherwise,type ZGB will be supplied.
- 2)When ordering,the type of the shaft seal should be stated.Otherwise,the expeller seal combined with packing will be supplied.
- 3)Generally the protecting grade of the matched motor is IP23 and the frequency is 50HZ.It should be stated for the special requirement.
- 4)Type ZGB pump is only used for one or two stages and ZGB(P) pump for three or four stages in series operation.