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WS型高效无堵塞无泄漏纸浆泵

WS Type High Efficiency Non-Clogging NonLeaking Pulp Pump

Product Catalog 2020

一、概述 General Introduction

WS 型高效无堵塞无泄漏纸浆泵是在消化吸收国外先进泵类产品的基础上，结合国内造纸、制浆企业用泵要求而研制开发的新一代纸浆泵产品，具有明显的高效，防堵塞性能好及运行时无泄漏、安装维修方便等优点，广泛应用于造纸、制浆企业纸浆介质的输送，同时也适用于企业制糖、淀粉加工、化工原料等介质的输送。

WS type high efficiency non clogging non leaking pulp pump in the digestion on the basis of absorbing foreign advanced pump products, combined with the domestic paper pulp pump requirements and developed a new generation of pulp pump products, efficient, anti-clogging, good performance, no leakage, easy installation and maintenance advantages, widely used in papermaking, pulp mills, pulp medium of transportation, also applies to enterprise sugar, starch processing, chemical raw materials, such as the transmission medium.

二、适用范围 Application Scope

★制浆造纸 Pulp and Paper
★制糖淀粉 Sugar Starch
★化工原料 Chemical Raw Material
★工业污水 Industrial Wastewater
★环保工程 Environmental Engineering
★市路工程 City Road Project

三、性能范围 Performance Scope

流量 Capacity:40-3300m3 ／h
扬程 Head:5-100m
纸浆浓度 Pulp Concentration ≤6%
工作温度 Working Temperature≤1200C

五、结构特点 Structure Features

1、该泵为后开门结构，维修时不必拆卸管路

The pump is back door structure, do not have to disassemble pipeline maintenance.

2、泵的进出口法兰按 1. 6MPa压力设计

Pump outlet flanges of pressure 1.6Mpa design.

3、叶轮采用三叶片 （或六叶片），敞开式叶轮， 效率很高且不需要轴向推力补偿， 易于维修 ，堵塞机会低

Impeller with three blades(or six blades), open impeller,very efficient and does not require the axial thrust compensation, easy maintenance, low clogging opportunity.

4、泵轴由使用油润滑且重载耐磨擦的进口 SKF圆柱滚子轴承和径向推力球轴承（角接触球轴承）组合支承，圆柱滚子轴承安装在泵端，径向推力球轴承则面对面安装在传动端．

The pump shaft use oil lubrication and overloaded abrasion imports SKF cylindrical roller thrust bearings and radial ball bearings(angular contact ball bearings)combination of support, cylindrical roller bearings installed in the pump end, radial thrust ball bearings face to face installed in the drive end.

5、轴封主要有标准单端面机械密封、前后排列的机械密封、双机橄密封、填料密封、动态

密封共五种型式，用户可根据要求和实际使用工况选用

Shaft seal mainly has standard single mechanical seal, tandem mechanical seals, dual mechanical seals, packing seals, dynamic seals of five types, the user can select according to the requirements and conditions of actual use.

6、叶轮采用失蜡精密铸造并作动平衡校验

Impeller use the paraffin wax precision casting and do dynamic balancing test.

7、材料有铸铁、铸钢、普通不锈钢、双相不锈钢四种

The material is cast iron, cast steel, stainless steel, duplex stainless steel four kinds.

泵型号	悬架号
WS80-265	WS-28
WS100-265	
WS125-265	
WS100-350	WS-38
WS125-350	
WS150-330	
WS125-400	WS-42
WS150-400	
WS200-380	
WS150-470	WS-55
WS200-470	
WS250-430	
WS350-470	WS-80
WS500-600	

七、性能参数　Performance　Parameter

泵型号　Pump Model		流量　Flow		扬程　Head	转速　Speed	功率　Power	效率　Eff.	叶轮直径　Impeller　Dia.
		M3/h	L/S	M	r/min	kw	(%)	mm
WS80-265		180	50	53.9	2900	55	60	265
	A	160	44.4	51.5		45	60	255
	B	154	42.8	44.9		37	60	245
	C	140	38.8	40.8		37	60	235
	D	130	36.2	36.7		30	60	225
	E	120	33.4	32.7	1450	22	60	215
		70	19.4	15		5.5	60	265
	A	60	16.6	13		4	60	245
	B	50	13.8	11		3	60	225
	C	40	11	9		2.2	60	205
WS100-265		220	61.5	42	1450	45	68	230
	A	210	58.3	39		45	68	225
	B	195	54.2	33		37	67	215
	C	180	50	29		30	66	205
	D	170	47.2	25		22	65	195
	E	165	45.8	20		18.5	62	185
		100	27.8	17	1450	11	66	265
	A	90	25	14		7.5	67	245
	B	80	22.2	11		4	65	225
	C	70	19.4	8.5		3	63	205
WS125-265		185	51.4	15.2	1450	15	74	265
	A	175	48.6	13.8		11	70	255
	B	165	45.8	12.5		11	70	245
	C	150	41.7	11		7.5	65	235
	D	140	38.9	9.3		7.5	65	225
	E	125	34.7	8		5.5	60	215
WS100-350		280	77.8	72	2950	110	65	310
	A	275	76.4	65		90	67	300
	B	270	75	59		75	70	290
	C	260	72.2	54		75	71	280
	D	250	69.4	48		55	72	270
		120	33.3	28		15	65	350
	A	110	30.6	25		15	69	330

	B	100	27.8	23	1450	11	72	310
	C	90	25	18		11	70	290
		400	111.1	59	2950	110	72	280
	A	380	105.6	55		110	71	270
WS125-350	B	360	100	46		90	65	260
	C	330	91.7	40	2950	75	60	250
	D	300	83.3	36		75	55	240
		200	55.6	32		30	69	350
	A	175	48.6	28		22	68	330
	B	150	41.7	25	1450	18.5	66	310
	C	125	34.7	21.5		15	65	290

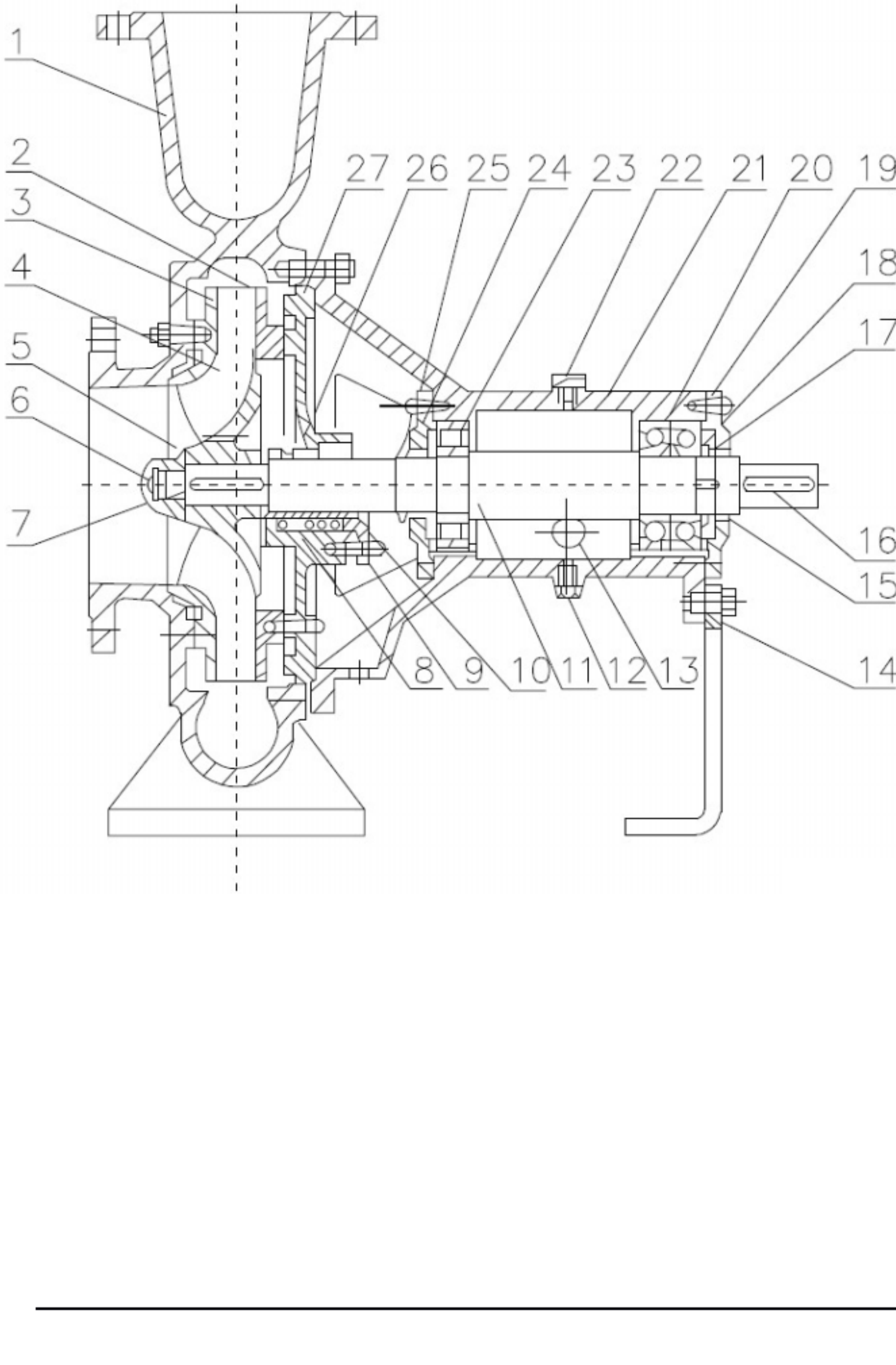
泵型号 Pump Model		流量 Flow		扬程 Head	转速 Speed	功率 Power	效率 Eff.	叶轮直径 Impeller Dia.
		M3/h	L/S	M	r/min	kw	(%)	mm
WS150-330		410	113.9	24	1450	37	78	330
	A	400	111.1	21.5		37	78	320
	B	380	105.6	20		30	75	310
	C	360	100	17.5		30	70	300
	D	350	97.2	15		22	70	290
	E	330	91.7	13		18.5	70	280
WS125-400		440	122.2	95	2950	160	85	330
	A	420	116.7	88		132	88	320
	B	410	113.9	82		132	86	310
	C	400	111.1	77		110	82	300
	D	370	102.8	68		110	80	290
	E	360	100	62		90	78	280
		225	62.5	40	1450	45	72	400
	A	200	55.6	36.5		37	73	380
	B	175	48.6	33		30	74	360
	C	150	41.7	30		22	73	340
WS150-400		400	111.1	40	1450	75	77	400
	A	390	108.3	38		55	76	390
	B	375	104.2	34		55	76	380
	C	360	100	32		45	75	370
	D	350	97.2	29		37	75	360
	E	340	94.4	27		37	74	350
		200	55.6	19.6	960	22	68	400
	A	183	50.8	17		15	67	380
	B	167	46.4	10		11	66	360
	C	150	41.7	13		11	65	340

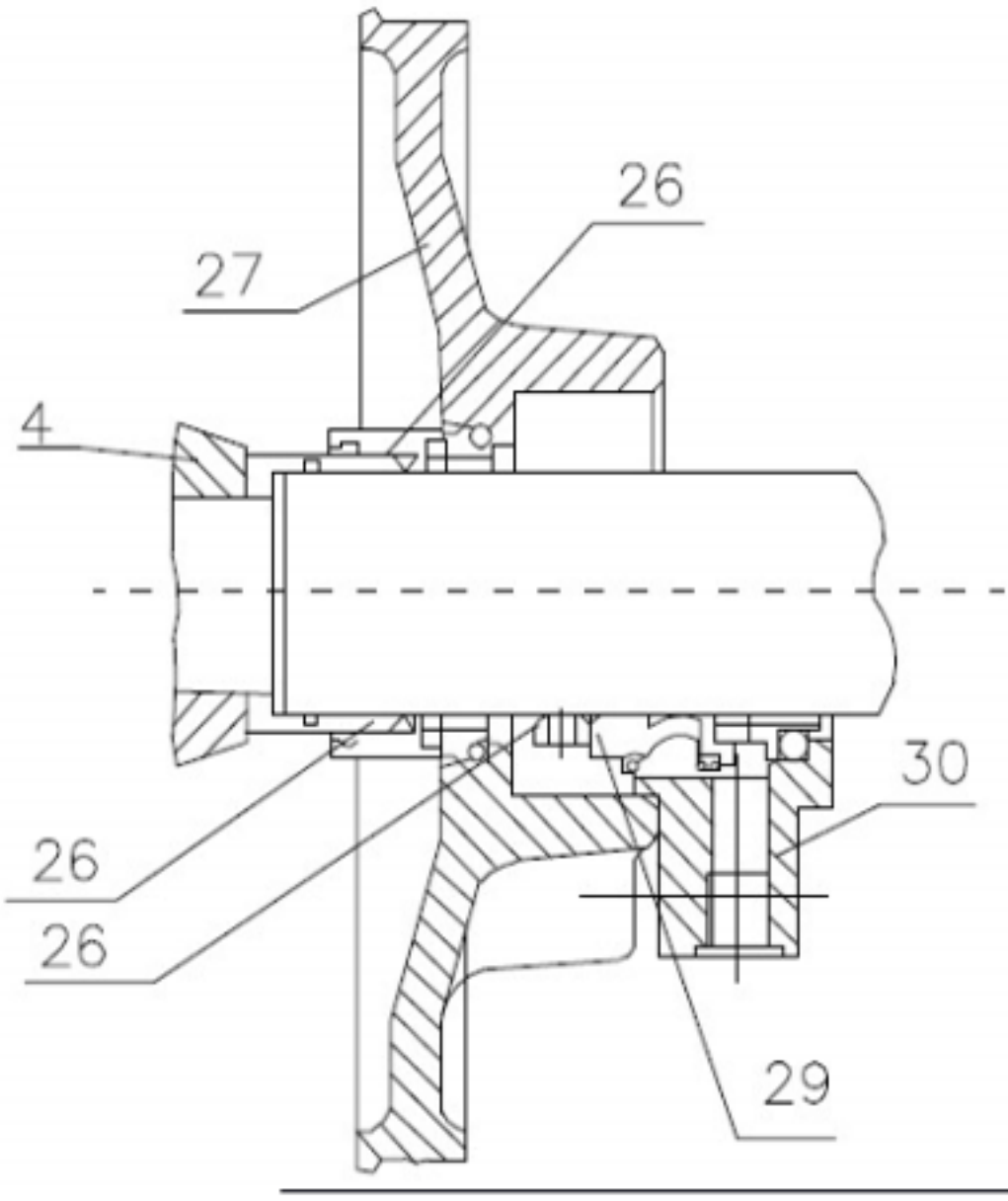
WS200-380		690	191.7	32	1450	90	82	380
	A	650	180.6	29.5		75	80	370
	B	620	172.2	28		75	80	360
	C	600	166.7	26		55	75	350
	D	550	152.8	24		55	75	340
	E	525	145.8	23		45	70	330
		368	102.2	15.5		22	74	380
	A	335	93	13.5		22	72	360
	B	300	83.3	12		15	69	340
	C	268	74.4	10.5	1450	15	66	320
		530	147.2	53		110	78	470
WS150-470	A	500	138.9	47		90	78	450
	B	480	133.3	42		90	75	430
	C	450	125	37		75	70	410
	D	420	116.7	32		55	70	390
	E	400	111.1	28		45	70	370
		335	93	24.5		30	72	470
	A	300	83.3	19		22	71	430
	B	266	73.9	14.5	960	15	71	390
	C	235	65.3	11		11	69	350

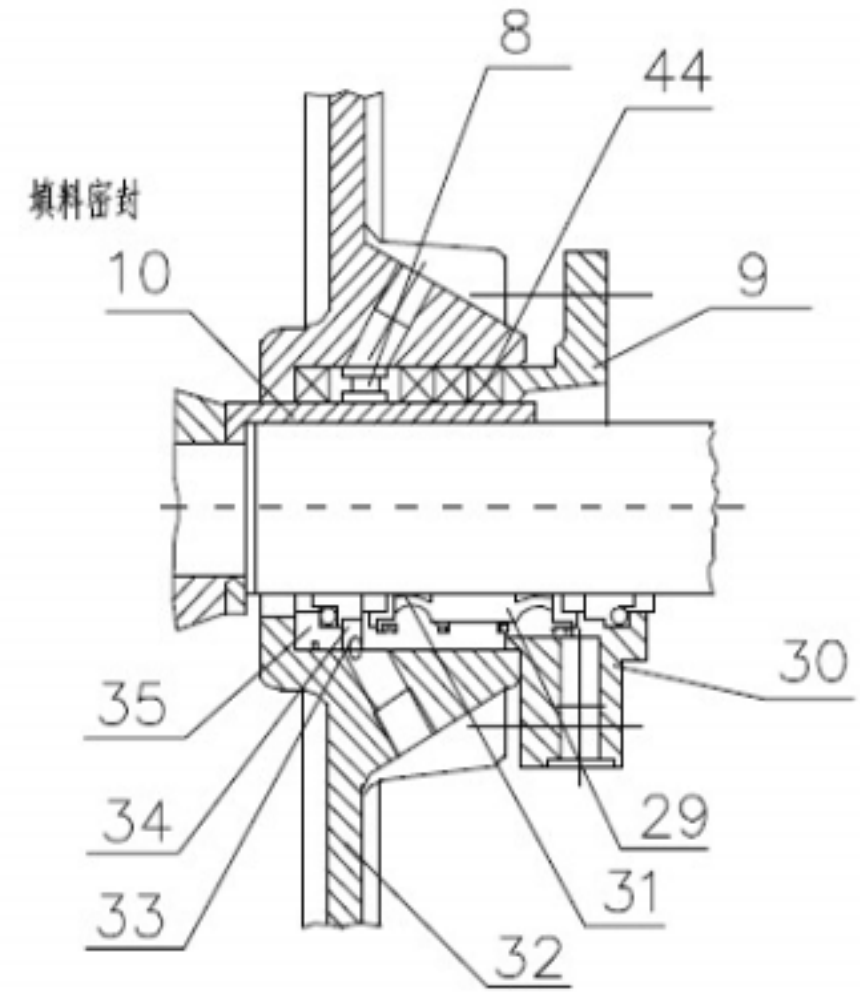
泵型号 Pump Model		流量 Flow		扬程 Head	转速 Speed	功率 Power	效率 Eff.	叶轮直径 Impeller Dia.
		M3/h	L/S	M	r/min	kw	(%)	mm
WS200-470		780	216.7	50	1450	160	80	470
	A	700	194.4	47		132	75	450
	B	650	180.6	42		110	75	430
	C	600	166.7	37		90	75	410
	D	550	152.8	32		75	75	390
	E	500	138.9	28		55	70	370
		400	111	25	960	45	73	470
	A	368	102.2	20		30	73	430
	B	335	93	15.5		22	71	390
	C	300	83.3	11		15	67	350
		1150	319.4	40	1450	200	80	430
	A	1070	297.2	35		160	75	410
	B	1000	277.8	30		132	75	390
	C	950	263.9	25		110	70	370
	D	900	250	21		90	70	350
	E	800	222.2	19		75	70	330
		670	186	19		45	73	430

WS250-430	A	600	166.7	14	960	30	71	390
	B	535	148.6	10		22	68	350
	C	468	130	8		15	63	320
WS350-470		1600	444.4	44	1450	280	84	470
	A	1450	402.8	40		250	82	450
	B	1400	388.9	36		200	82	430
	C	1300	361.1	32		185	75	410
	D	1200	333.3	28		160	75	390
	E	1100	305.6	21		132	75	370
		1000	277.8	20	960	75	80	470
	A	950	264	15		55	78	430
	B	900	250	11.5		45	71	390
	C	850	236	9		37	70	350
WS500-600		2600	722.2	28.5		280	85	600
	A	2400	666.7	26	960	250	83	575
	B	2200	611.1	24		220	80	550
	C	2000	555.6	22		185	80	525
	D	1900	527.6	19		160	75	500
	E	1800	500	18		132	75	475
		1950	514.7	16		110	81	600
	A	1650	458.3	13.5		90	76	550
	B	1500	416.7	12	750	75	76	525
	C	1350	375	10		55	71	475

八、泵结构简图　Structure　Diagram



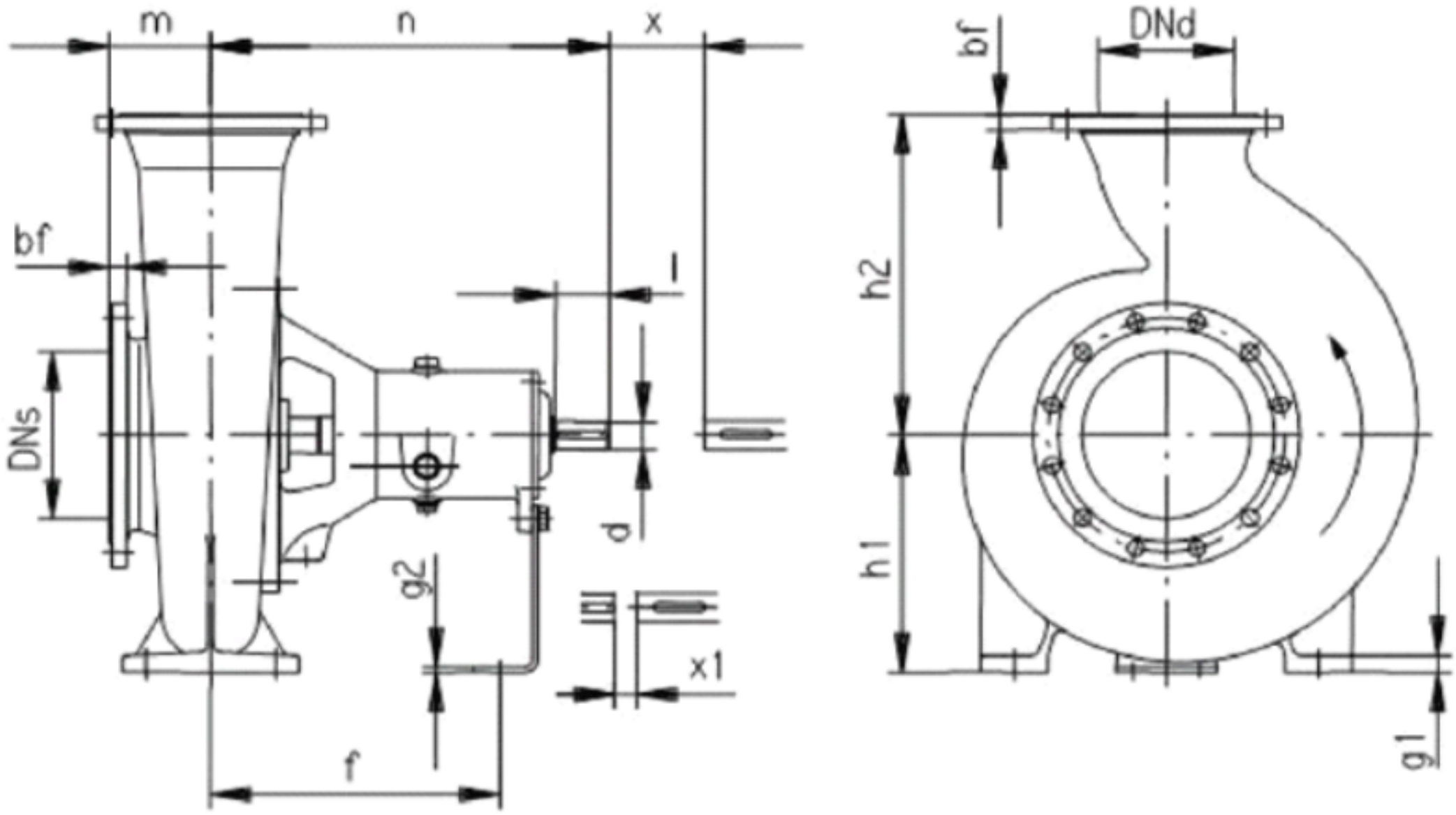


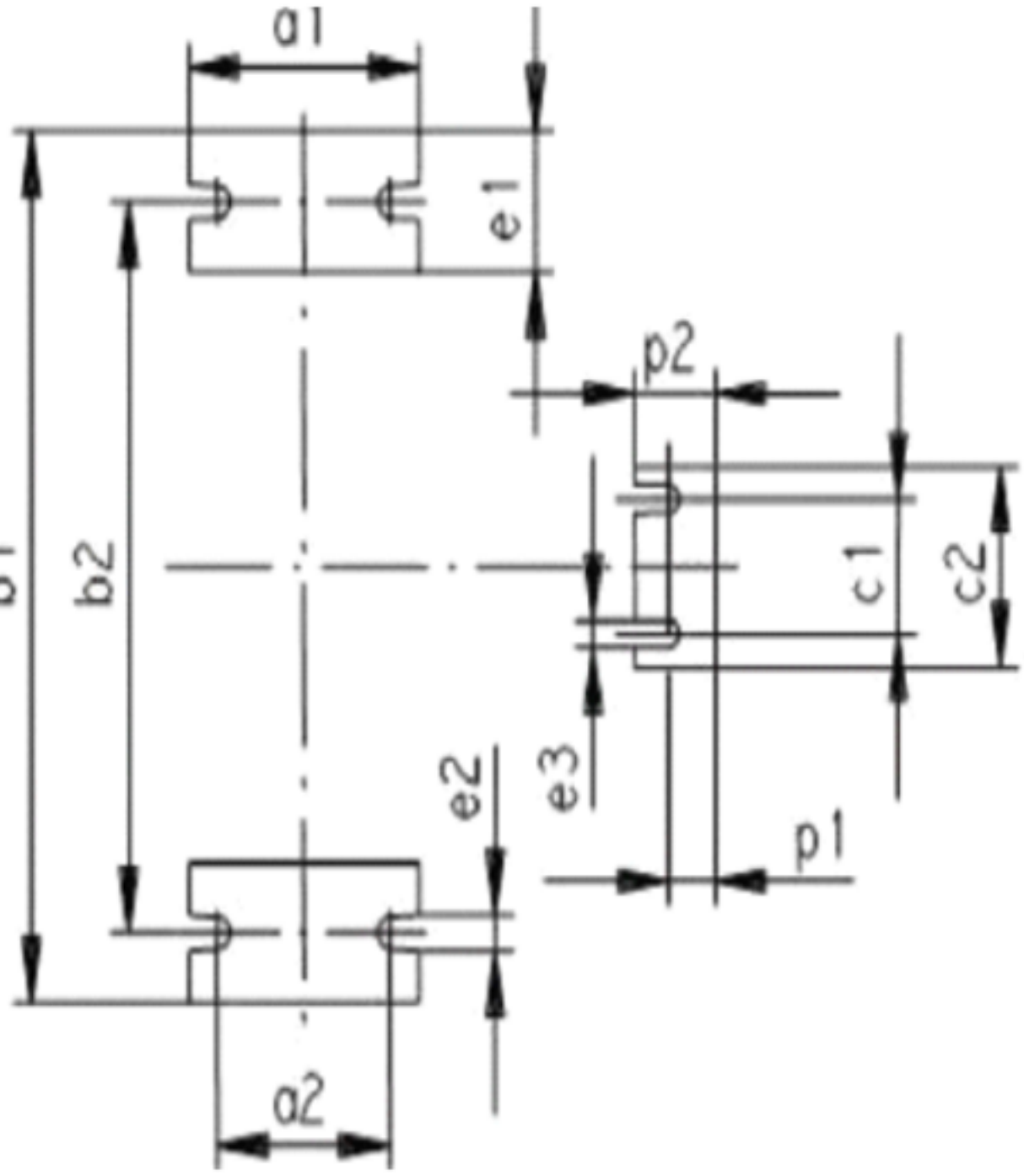


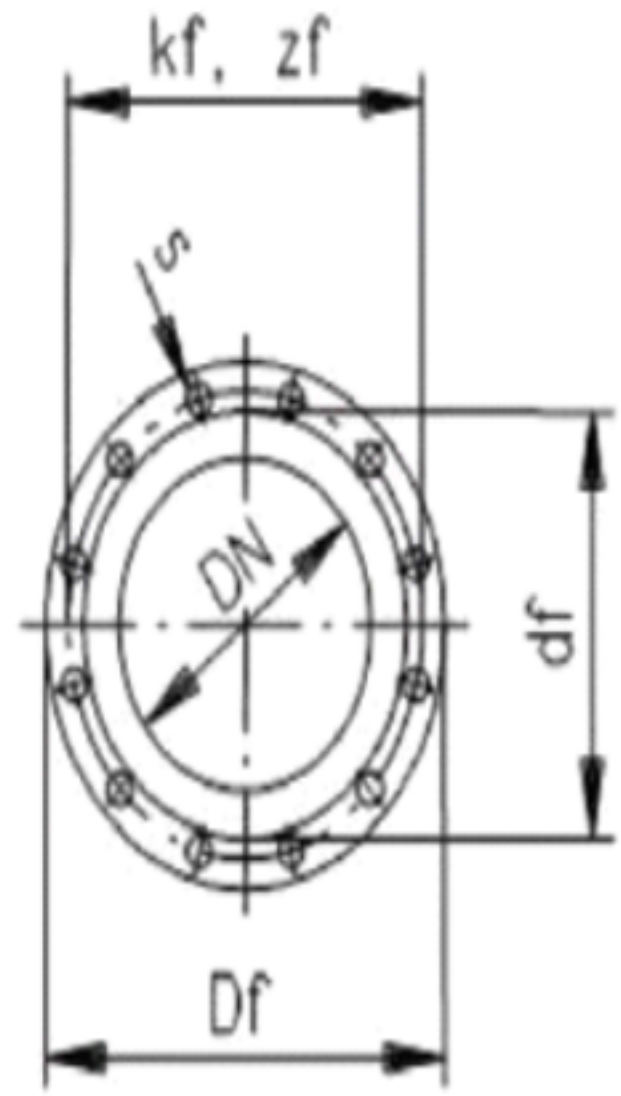
编号 Code.	数量 Quantity	备件名称 Name	编号 Code.	数量 Quantity	备件名称 Name
1	1	泵体 Pump Body	23	1	圆柱滚子轴承 Cylindrical Roller Bearings
2	1	后耐磨衬 Back Wear Line	24	1	轴承盖（泵端） Bearing Cover
3	1	前耐磨衬 Front Wear Line	25	1	挡水圈 Retaining Ring
4	1	叶轮 Impeller	26	1	机封 AK5M 型（sj/si） Mechanical Seal
5	1	防松垫片 Locking Gasket	27	1	泵盖 Pump Cover
6	1	叶轮螺母 Impeller Nut	28	1	定位环 Positioning Ring
7	1	键（泵端） Key(Pump End)	29	1	机封密封 MG 型（k/sj) Mechanical Seal
8	1	填料环 Packing Ring	30	1	机封压盖 Seal Gland
9	1	填料压盖 Packing Gland	31	1	机械密封 MG 型（k/si） Mechanical Seal
10	1	轴套 Shaft Sleeve	32	1	填料泵盖 Packing Pump Cover
11	1	轴 Shaft	33	1	止推圈 Thrust Ring
12	1	放油螺塞 Oil Drain Plug	34	1	锁片 Locker
13	1	油标 Oil Mark	35	1	支撑环 Support Ring
14	1	支架 Support Frame	36	1	动态密封后耐磨衬 Dynamic Seal Back Wear-resistant Lining
15	2	骨架油封 Skeleton Seal	37	1	动态密封泵盖 Dynamic Seal Pump Cover
16	1	键（联轴器端） Key	38	1	副叶轮 Vice Impeller
17	1	圆螺母 Round Nut	39	1	动态密封支撑环 Dynamic Seal Support Ring
18	1	止退垫片 Thrust Gasket	40	1	PTFE 密封环 PTFE Seal Ring
19	1	轴承盖（联轴器端） Bearing Cover	41	1	调整环 Adjustable Ring
20	2	角接触球轴承 Angle Contact Ball Bearing	42	1	动态密封轴套 Dynamic Seal Shaft Sleeve

21	1	悬架 Suspension	43	1	止推环 Thrust Ring
22	1	通气塞 Vent Plug	44	4（5）	填料 Packing

九、尺寸图 (1)泵尺寸图 Pump Dimensions







泵法兰连接尺寸（单位： mm）Pump Flange Connection

DN	PN	Df	Kf	df	S	zf	bf
80	10/16	200	160	138	19	8	23
100	10/16	220	180	158	19	8	24
125	10/16	250	210	188	19	8	26
150	10/16	285	240	212	24	8	26
200	10	340	295	268	24	8	26
250	10	395	350	320	24	12	26
300	10	445	400	370	24	12	28
350	10	505	460	430	24	16	28
500	10	670	620	585	26	20	34

悬架规格 Suspension Model	d	i	e1	e2	e3	g1	g2	p1	p2
WS-28	28	60	80	19	19	16	10	31	50
WS-38	38	72	100	24	24	21	10	48	70
WS-42	42	80	100	28	28	26	10	45	70
WS-55	55	100	125	28	28	26	10	60	95
WS-80	80	140	125	32	32	29	12	88	115

型　号 Model	悬架 Suspension	Dns	DNd	M	n	X	x1	h	h2	a1	a2	b1	b2	c1	c2	f
WS80-265	WS-28	100	80	130	480	100	4	240	300	160	112	400	315	80	130	370
WS100-265		125	100	130	480	100	4	240	300	160	112	400	315	80	130	370
WS125-265		150	125	130	480	100	4	240	300	160	112	400	315	80	130	370
WS100-350	WS-38	125	100	130	555	140	4	315	400	200	142	500	400	100	150	414
WS125-350		150	125	130	555	140	4	315	400	200	142	500	400	100	150	414
WS150-330		200	150	130	555	140	4	315	400	200	142	500	400	100	150	414
WS125-400	WS-42	150	125	150	590	140	4	355	480	260	192	550	450	100	150	440
		200	150	150	590	140	4	355	480	260	192	550	450	100	150	440
WS200-380		250	200	150	590	140	4	355	480	260	192	550	450	100	150	440
WS150-470	WS-55	200	150	160	720	180	4	410	550	270	202	650	550	120	180	530
WS200-470		250	100	160	720	180	4	410	550	270	202	650	550	120	180	530
WS250-430		300	250	160	720	180	4	410	550	270	202	650	550	120	180	530
WS350-470	WS-80	350	350	180	1055	180	4	500	700	320	230	770	650	180	240	780
WS500-600		500	500	340	1072	250	d	605	895	400	310	960	840	180	240	794

注意： 1. 表所示尺寸　x、　x1 为泵端联轴器与电机端联轴器之间间隙的参考值；

2. 选购时请注明联轴器种类：　（1）x 尺寸表示膜片联轴器　　(2)x1　尺寸表示弹性柱销联轴器。

Note:

1. X, X1 means the space between pump coupling and motor coupling.

2. X means diaphragm coupling, X1 means flexible pin coupling.

(2) 带底座的泵尺寸图　　Dimensions With Basements

图 1：（膜片联轴器）　Diaphragm Coupling

一、概述 General Introduction

WS 型高效无堵塞无泄漏纸浆泵是在消化吸收国外先进泵类产品的基础上，结合国内造纸、制浆企业用泵要求而研制开发的新一代纸浆泵产品，具有明显的高效，防堵塞性能好及运行时无泄漏、安装维修方便等优点，广泛应用于造纸、制浆企业纸浆介质的输送，同时也适用于企业制糖、淀粉加工、化工原料等介质的输送。

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★制糖淀粉 Sugar Starch
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★环保工程 Environmental Engineering
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扬程 Head:5-100m
纸浆浓度 Pulp Concentration ≤6%
工作温度 Working Temperature≤1200C

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The pump is back door structure, do not have to disassemble pipeline maintenance.

2、泵的进出口法兰按 1. 6MPa压力设计

Pump outlet flanges of pressure 1.6Mpa design.

3、叶轮采用三叶片 （或六叶片），敞开式叶轮， 效率很高且不需要轴向推力补偿， 易于维修 ，堵塞机会低

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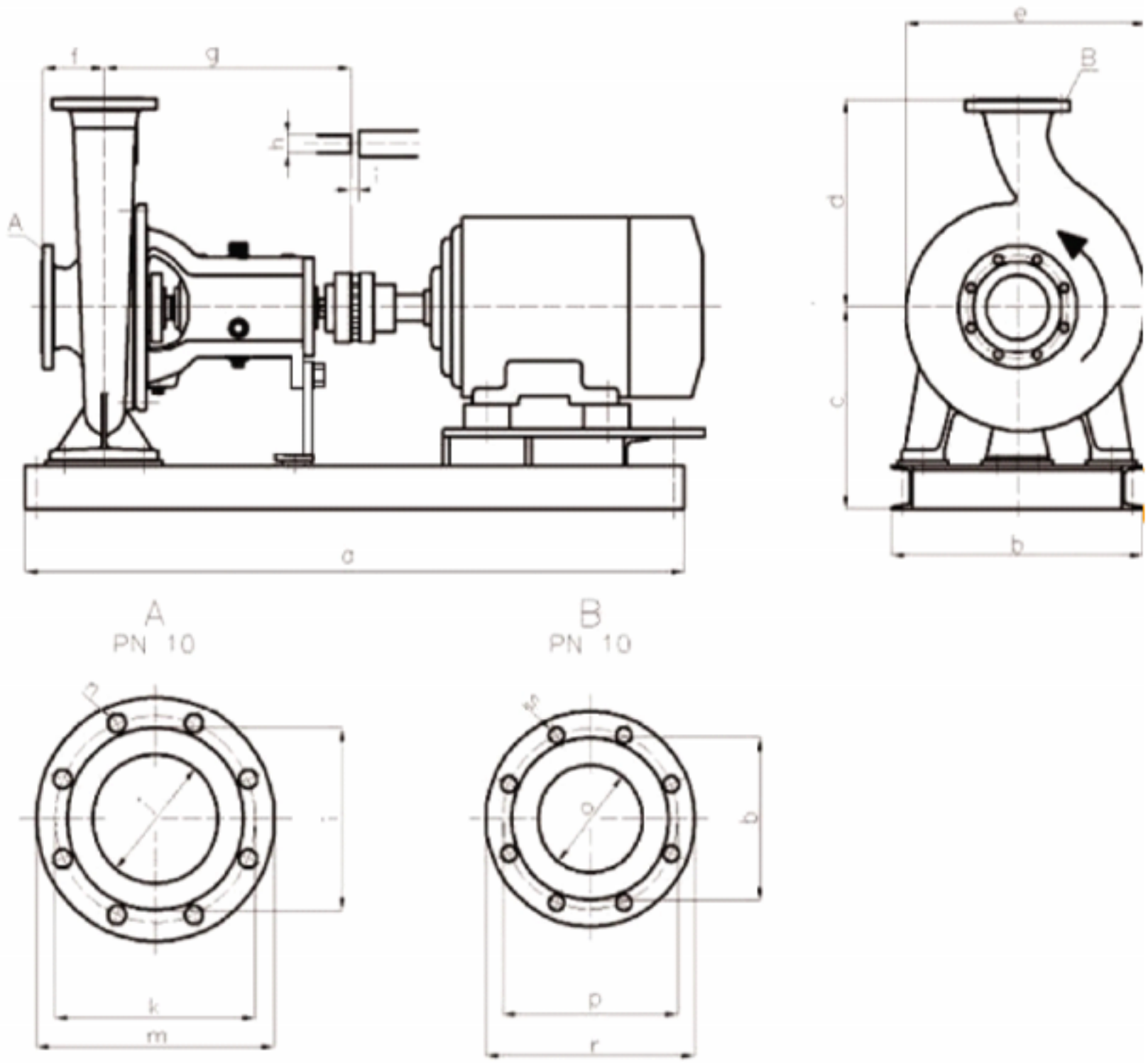
4、泵轴由使用油润滑且重载耐磨擦的进口 SKF圆柱滚子轴承和径向推力球轴承（角接触球轴承）组合支承，圆柱滚子轴承安装在泵端，径向推力球轴承则面对面安装在传动端．

The pump shaft use oil lubrication and overloaded abrasion imports SKF cylindrical roller thrust bearings and radial ball bearings(angular contact ball bearings)combination of support, cylindrical roller bearings installed in the pump end, radial thrust ball bearings face to face installed in the drive end.

5、轴封主要有标准单端面机械密封、前后排列的机械密封、双机橄密封、填料密封、动态



mm

型号 Model	a	d	c	d	e	f	g	h	i	j	k	i	m	n	o	p	q	r	s
ws80-265	1225	450	330	300	412	130	480	28	100	100	180	158	220	19	80	160	138	200	19
ws100-265	1225	450	330	300	435	130	480	28	100	125	210	188	250	19	100	180	158	220	19
ws125-265	1225	450	330	300	455	130	480	28	100	150	240	212	285	24	125	210	188	250	19
ws100-350	1500	550	425	400	511	130	555	38	140	125	210	188	250	19	100	180	158	220	19
ws125-350	1500	550	425	400	540	130	555	38	140	150	240	212	285	24	125	210	188	250	19
ws150-330	1500	550	425	400	570	130	555	38	140	200	295	268	340	24	150	240	212	285	19
ws125-400	1680	600	468	480	574	150	590	42	140	150	240	212	285	22	125	210	188	250	19
ws125-400.2	2000	770	502	480	574	150	590	42	180	150	240	212	285	22	125	210	188	250	19
ws150-400	1680	600	468	480	625	150	590	42	140	200	295	268	340	24	150	240	212	285	24
ws150-400.2	2000	770	502	480	625	150	590	42	180	200	295	268	340	24	150	240	212	285	24
ws200-380	1680	600	468	480	680	150	590	42	140	250	350	320	395	24	200	295	268	340	24
ws150-470	2170	770	542	550	681	160	720	55	180	200	295	268	340	24	150	240	212	285	24
ws200-470	2170	770	542	550	740	160	720	55	180	250	350	320	395	24	200	295	268	340	24
ws250-430	2170	770	542	550	800	160	720	55	180	300	400	379	445	24	250	350	320	395	24
ws350-470	2595	870	672	700	950	180	1055	80	180	350	460	430	505	24	350	460	430	505	24
ws500-600	2895	1100	830	895	1195	340	1072	80	250	500	620	585	670	26	500	620	585	670	26

十、泵基础尺寸图　Basement Dimenions

图 1：（膜片联轴器）　Diaphragm Coupling

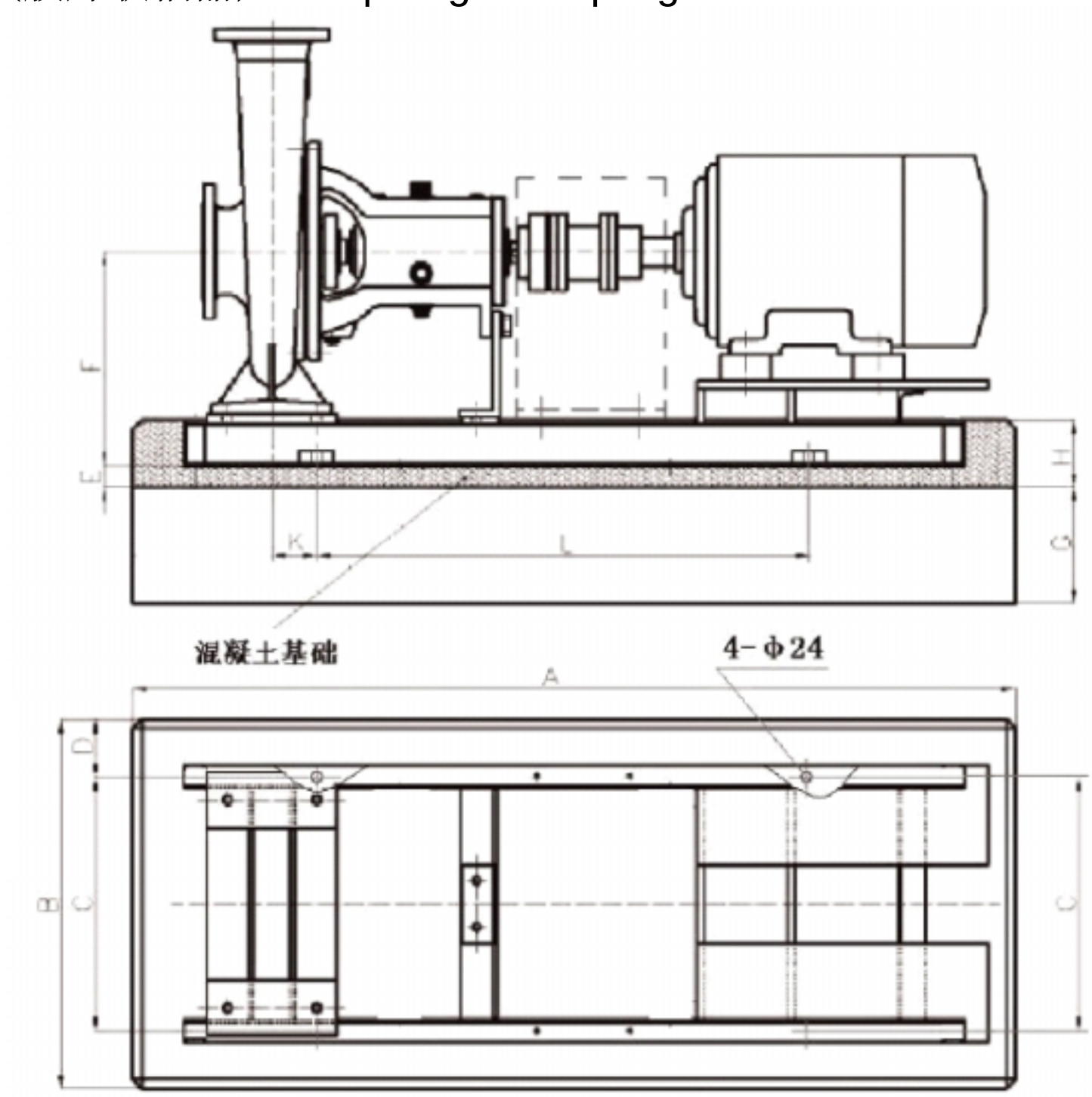
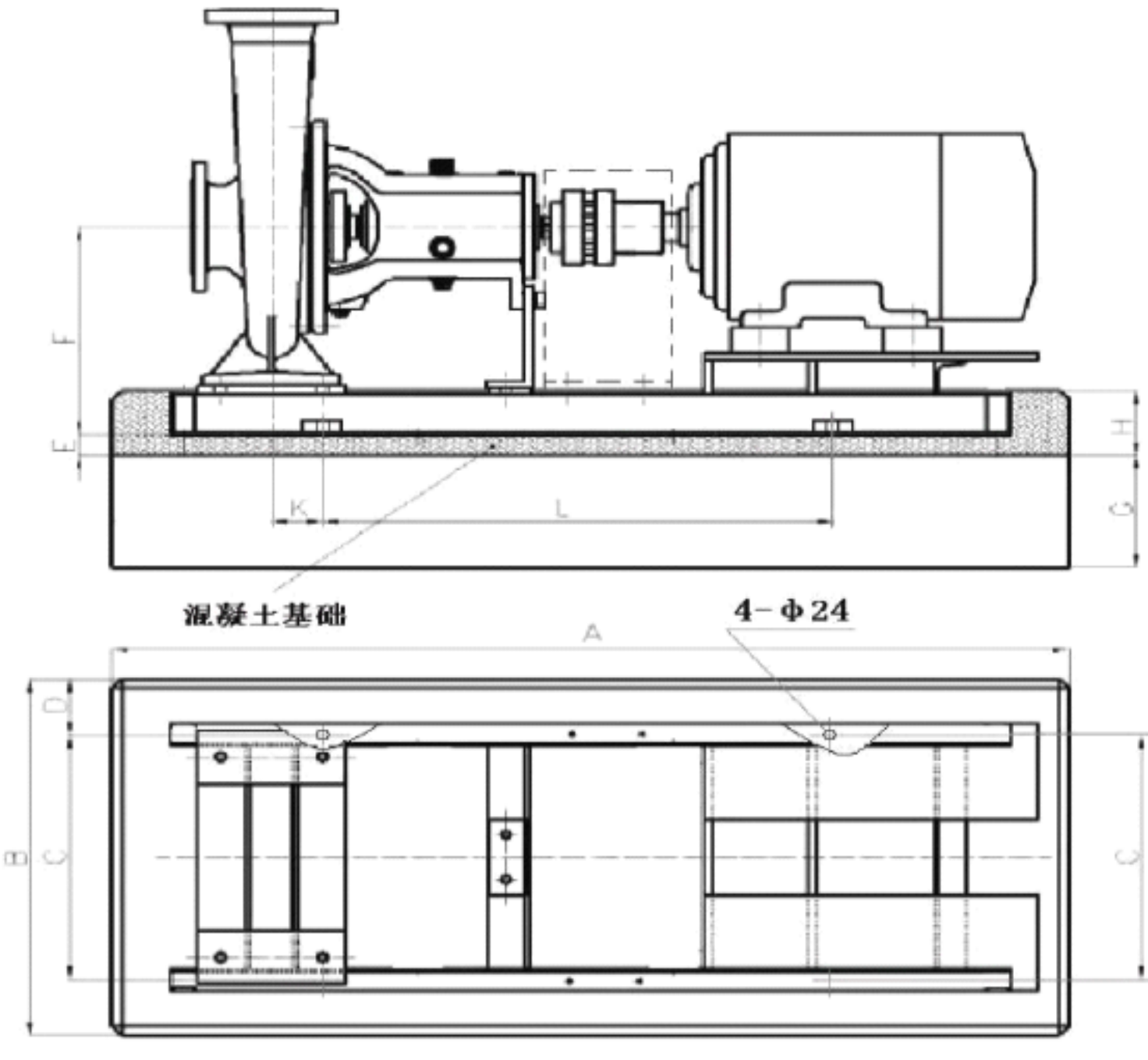


图 2：（弹性柱销联轴器）　Flexible Pin Coupling



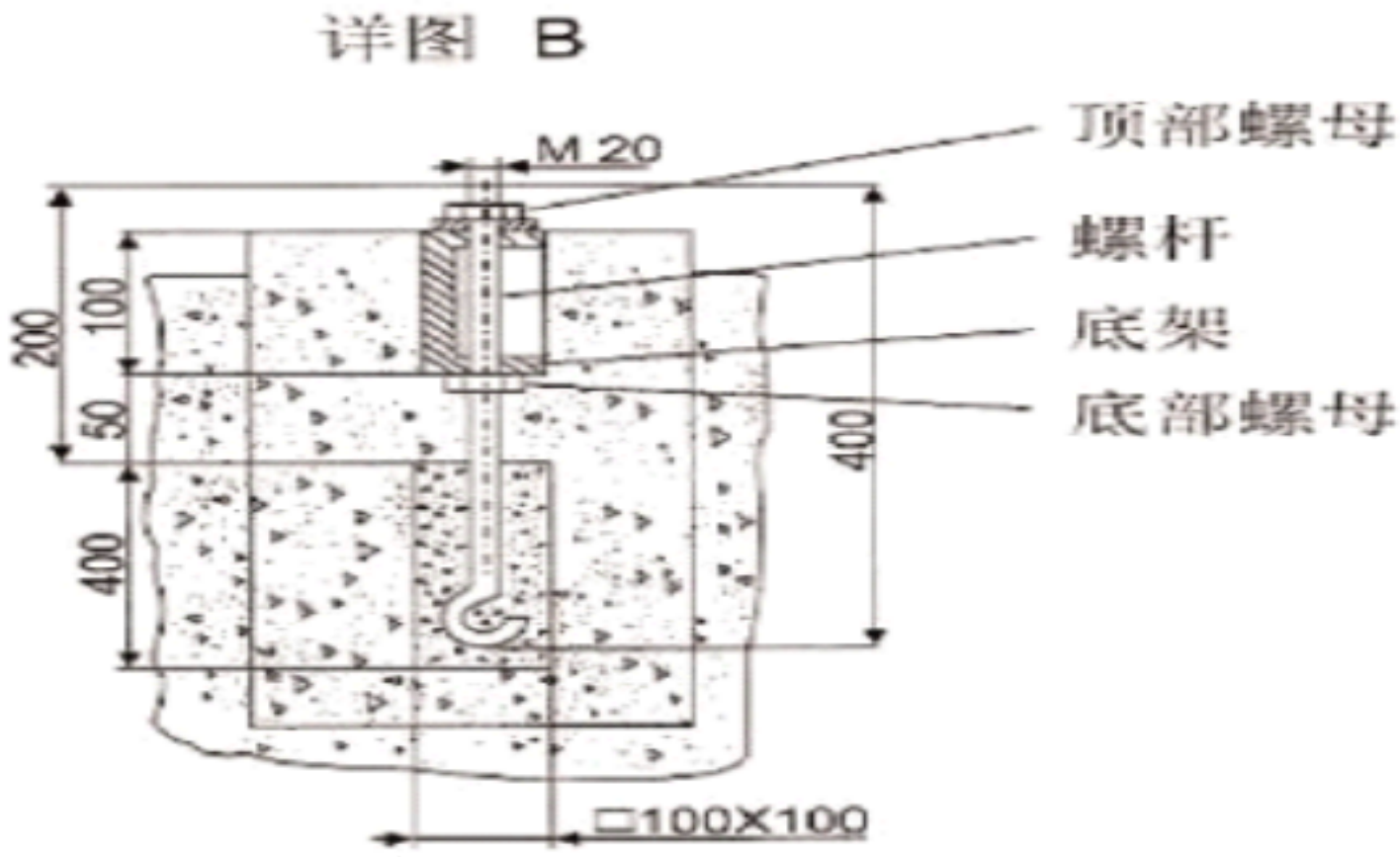
底座尺寸：（见图 1 膜片联轴器） Diaphragm Coupling

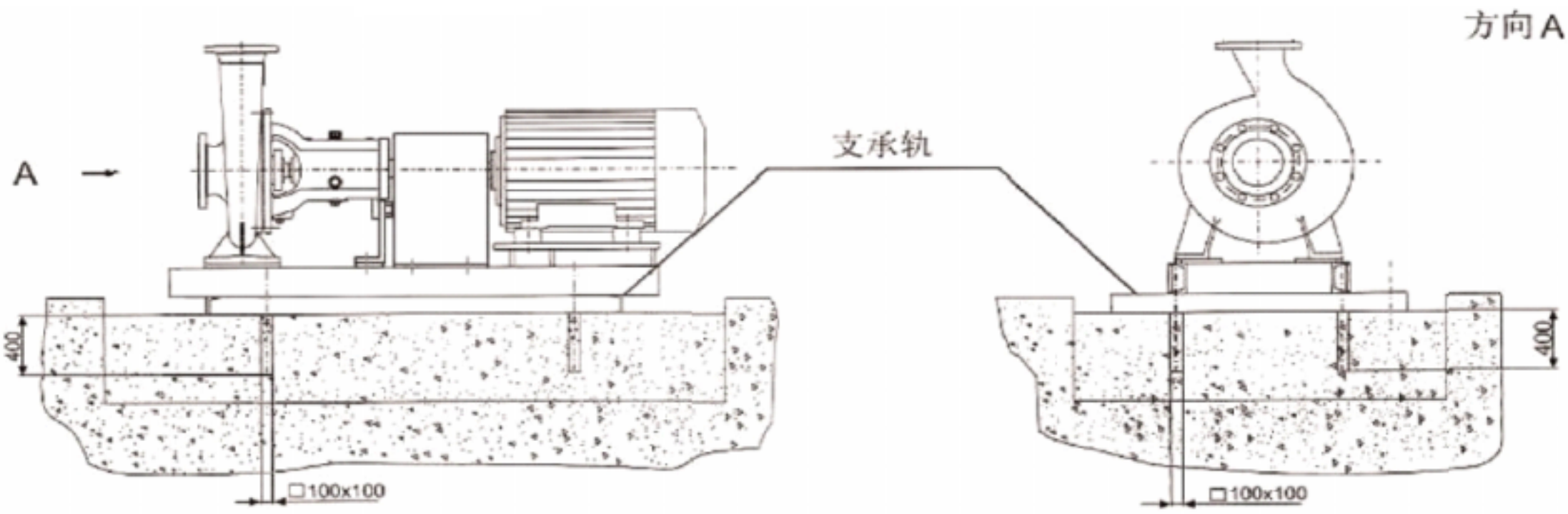
型号 Model	配用电机 Motor	A	B	C	D	E	F	G	H	K	L
WS-265	Y250M-2/55KW	1655	900	405	247.5	50	330	300	80	56	1006
WS100-265	Y225M-2/45KW	1655	900	405	247.5	50	330	300	80	56	938.5
WS125-265	Y160L-4/15KW	1655	900	405	247.5	50	330	300	80	56	869
WS100-350	Y315S-2/110KW	1950	1000	500	250	50	425	300	100	71	1183
WS125-350	Y315S-2/11KW	1950	1000	500	250	50	425	300	100	71	1183
WS150-330	Y225S-4/37KW	1950	1000	500	250	50	425	300	100	71	1056
WS125-400	Y315L1-2/160KW	2150	1050	550	250	50	468	300	100	96	1244
WS150-400	Y280S-4/75KW	2150	1050	550	250	50	468	300	100	96	1148
WS200-380	Y280M-4/90KW	2150	1050	550	250	50	468	300	100	96	1173.5
WS150-470	Y315S-4/110KW	2400	1200	715	242.5	50	542	300	120	101	1388
WS200-470	Y315L1-4/160KW	2400	1200	715	242.5	50	542	300	120	101	1439
WS250-430	Y315L2-4/200KW	2400	1200	715	242.5	50	542	300	120	101	1439
WS350-470	Y355L1-4/280KW	2800	1300	805	247.5	50	672	300	160	115	1859
WS500-600	Y355L3-6/250KW	3200	1550	1030	260	50	830	300	200	155	1906

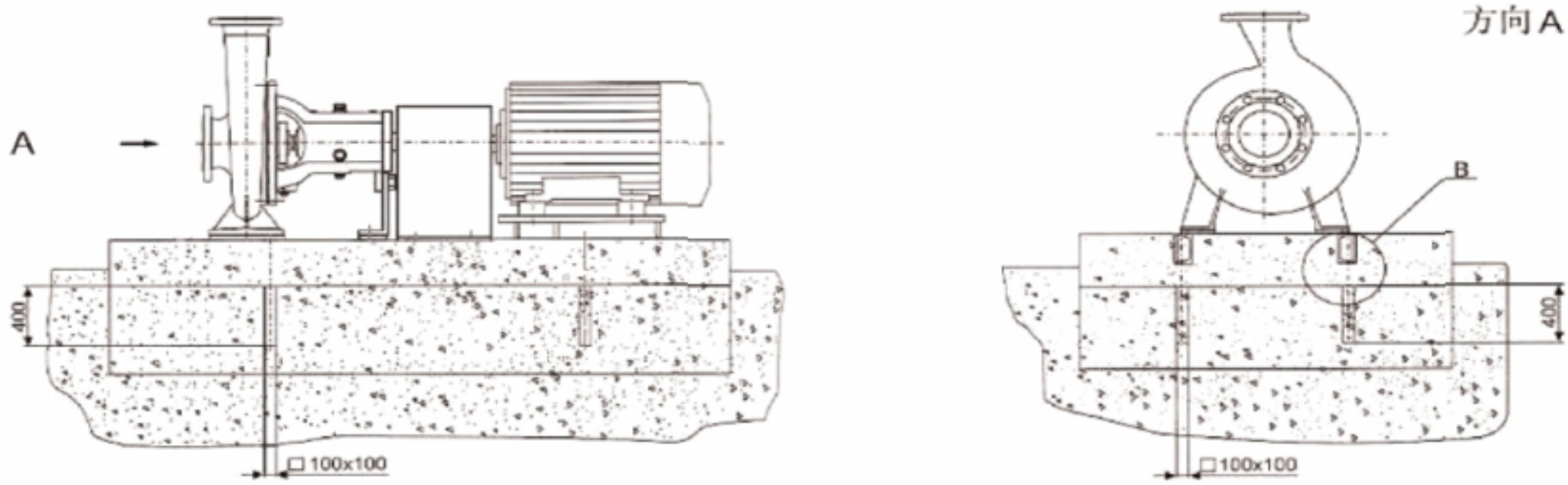
底座尺寸：（见图 2 弹性柱销联轴器） Flexible Pin Coupling

型号 Model	配用电机 Motor	A	B	C	D	E	F	G	H	K	L
WS780-265	Y250M-2/55KW	1560	900	405	247.5	50	330	300	80	56	911.5
WS100-265	Y225M-2/45KW	1560	900	405	247.5	50	330	300	80	56	843.5
WS125-265	Y160L-4/15KW	1560	900	405	247.5	50	330	300	80	56	774
WS100-350	Y315S-2/110KW	1815	1000	500	250	50	425	300	100	71	1048
WS125-350	Y315S-2/110KW	1815	1000	500	250	50	425	300	100	71	1048
WS150-330	Y225S-4/37KW	1815	1000	500	250	50	425	300	100	71	1048
WS125-400	Y315L1-2/160KW	2015	1050	550	250	50	468	300	100	71	921
WS150-400	Y280S-4/75KW	2015	1050	550	250	50	468	300	100	96	1013
WS200-380	Y280M-4/90KW	2015	1050	550	250	50	468	300	100	96	1038.5
WS150-470	Y315S-4/110KW	2225	1200	715	242.5	50	542	300	120	101	1213
WS200-470	Y315L1-4/160KW	2225	1200	715	242.5	50	542	300	120	101	1264
WS250-430	Y315L2-4/200KW	2225	1200	715	242.5	50	542	300	120	101	1264
WS350-470	Y355L1-4/280KW	2625	1300	805	247.5	50	672	300	160	115	1684
WS500-600	Y355L3-6/250KW	2955	1550	1030	260	50	830	300	200	155	1661

十一、泵的安装　Pump Installation







a)在设备安装前，必须按设备基础图和实物对基础作校核，确认设备基础无误。

Before equipment installation, equipment foundation drawing and physical foundation for verification, to confirm the basis of equipment is correct.

b)设备安放到位，把地脚螺栓穿进泵底架孔，在底架上面和下面各上一螺母。在泵底架下垫置支承轨（h=50mm），把原进口法兰与吸入管法兰对正。

The device is fixed in the place, the anchor bolts is threaded into the pump underframe hole on the chassis above and below each of the upper nut. In the pump chassis, put a support rail(h=50mm) to make the inlet flange match the suction pipe flange.

c)用出口法兰从纵横两个方向粗调泵的水平。把水平仪放在泵的出口上，用垫铁放在泵底架下，调整垫铁使之调整到泵处于水平状态（即水平气泡在中央）。

Outlet flange from the aspect both directions coarse level of the pump. Level meter on the outlet of the pump with the horn on the pump chassis, adjust the horn to make adjustments to the pump in a horizontal state(that is, the level of air bubbles in the center).

d)第一次灌浆，灌浆时注意不得碰动设备，地脚螺栓在基础孔中竖直放置。

First grouting shall not touch moving equipment, anchor bolts in the foundation holes placed vertically.

e)混凝土完全固化后，均匀上紧底架上、下螺母，撤去底架下支承轨，开始精调工作。用底架上、下螺母调校泵的水平度，把水平仪放在出口法兰上，从纵横两个方面检查，注意不要弄弯底架。

Concrete is fully cured, evenly tighten the bottom shelf, under the nut, dropping the chassis support rail to start fine-tuning work. Nut adjust the level of the pump with the bottom shelf, under the level meter on the outlet flange, check both vertically and horizontally, be careful not to bend the chassis.

f)第二次灌浆，灌至底架表面，固化后上紧螺母。把螺杆多余部分切除（螺杆外露 5mm），螺母和螺杆喷漆防锈。

The second grouting, filling to the chassis surface after curing and tighten the nuts. Resection of the excess part of the screw(screw exposed 5mm), nut and screw painting anti-rust.

g)如果电机没有与泵联接，则安装电机，把半联轴器装到电机轴上，使联轴器端面与电机轴末端齐平，并上紧螺纹销钉。

If the motor and pump coupling, installing the motor, the coupling half onto the motor shaft, so flush with the end of the coupling end face of the motor shaft and tighten the set screws.

h)底架是为与该型号泵可能相配最大电机设计的，如果要安装的电机较小，可用所提供的电机垫块垫高，月贯穿螺栓或切断的丝杆固定电机。

The chassis is designed to match the maximum motor pump, if the motor is small, can use the pad to make higher, use through bolts or cut screw to fix the motor.

十二、泵的备件 Pump Spare Parts

订购备件时请提供以下资料：

- 名称及上面总装图上所标示的编号
- 泵的型号和泵的制造编号：
- 部件的材料，推荐使用下列备件

Pleaseprovide the following information when ordering spare:

-Name or code of assembly diagram.

-Pump model and pump manufacture serial.

-Part material.

1、轴承型号清单 Bearing Model List

悬架规格 Suspension Model	泵型号 Pump Model	数量 Quantity	泵端轴承 Pump Bearing	数量 Quantity	联轴器端轴承 Coupling End Bearing
WS-28	WS80-265 WS100-265 WS125-265	1	NU308E	2	7308B
WS-38	WS100-350 WS125-350 WS150-330	1	NU310E	2	7310B
WS-42	WS125-400 WS150-400 WS200-380	1	NU312E	2	7312B
WS-55	WS150-470 WS200-470 WS250-430	1	NU316E	2	7316B
WS-80	WS350-470 WS500-600	1	NU320E	2	7320B

2、泵密封清单 Pump Seal List

悬架规格 Suspension Model	泵型号 Pump Model	机械密封 Mechanical Seal	填料密封 Packing	动态密封 （PTFE 密封环） Dynamic Seal	泵端骨架油封 Pump End Skeleton Oil Seal	联轴器端骨架油封 Coupling End Skeleton Oil Seal
WS-28	WS80-265 WS100-265 WS125-265	MG12S14/38	48/68*10	165/55*4	A38*52*7	A35*47*7
WS-38	WS100-350 WS125-350 WS150-330	MG12S14/48	60/80*10	165/66*4	A48*62*8	A45*60*8
WS-42	WS125-400 WS150-400 WS200-380	MG12S14/53	65/85*10	175/71*4	A55*70*8	A55*70*8
WS-55	WS150-470 WS200-470 WS250-430	MG12S14/65	75/95*10	215/85*4	A70*90*10	A70*90*10
WS-80	WS350-470 WS500-600	MG12S14/90	105/130*12	215/106*4	A95*120*12	A95*120*12

十四、故障原因及其解决办法　　False And Troubleshooting

故障 Failure	原因 Reason	解决方法 Solution
电机停转　Motor stops.	没有电力　No power.	检查电力供应，如需电力维修，只能让熟练电工进行 Check power and fix it.
	泵内浆堵塞　Pump clogged.	取出浆料　Remove clogging.
	电机坏了　Motor breaks.	检查电机，需要时更换电机　　Repair or change motor.
	控制板故障　Control board failure	检查并维修控制板　　Check and fix it.
	叶轮被耐磨衬卡住 Impeller stucks	调整叶轮和耐磨衬之间的间隙　　Adjust the space.
耗费功率过大，电机经常跳闸	叶轮与耐磨衬相碰 Impeller collide with wear-resistant lining.	调整叶轮和耐磨衬之间的间隙 Adjust the clearance between the impeller and wear-resistant lining.
	流量超过设计流量 Flow is over design.	减少流量 Reduce flow.
	电机功率偏小 Motor power is not enough.	更换大电机 Use bigger motor.
	轴承损坏　Bearing damage.	更换轴承　Change bearings.
	联轴器调整不好或没调整 Coupling adjustment badly.	重调联轴器 Readjust couplings.
实际流量低于设计流量 Real flow is less than design	出口阀门开度太小 Outlet valve opening is too small.	加大阀门开度 Increase the valve opening.
	泵内堵塞 Clogging of the pump.	清除异物 Removal of clogging.
	叶轮与耐磨衬的间隙过大 The gap of impeller and wear-resistancelining is too large.	调整叶轮和耐磨衬之间的间隙 Adjust the gap of impeller and wear-resistance lining.
	叶轮与耐磨衬磨损 Impeller and wear-resistance lining wear.	更换叶轮和耐磨衬 Change impeller and wear-resistance lining.
	电机转速不对 Wrong motor speed.	检查电机转速和电力供应 Check motor speed and power supply.
	吸入空气　Inhaled air.	检查管道和密封是否泄漏 Check leakage of pipe and seal.
	发生汽蚀　Cavitation	请致电我们的专家　Call us.
	泵的设计扬程不够 Pump design head is not enough.	请致电我们的专家，商量加大扬程　　Call us.
实际扬程低于设计扬程 Real head is lower than design.	泵内堵塞　Clogging of pump.	清楚异物
	出口阀门开度太大 Outlet valve opening is too large.	减少阀门开度 Decrease the valve opening.
	叶轮磨损　Impeller wear.	更换叶轮　Change impeller
	吸入空气　Inhaled air.	检查管道和密封是否泄漏　　Check leakage of pipe and seal.
	浆温度太高　Temp. is too high.	降低浆料温度　Cooling the pumping liquid.
	电机转速不对	检查电机和电力供应，需要时更换电机

	Wrong motor speed.	Check motor speed and power supply.
	发生汽蚀 Cavitation	请致电我们的专家 Call us.
泵不能送高浓度浆 Can't pump high concentration pulp.	泵的设计扬程不够 Pump design head is not enough.	请致电我们的专家，商量加大扬程 Call us.
	泵内堵塞 Clogging inner pump.	请致电我们的专家，增设防堵措施 Call us.
强烈振动 /或噪音大 Strong vibration/noise	联轴器调整不好或没作调整 Coupling adjustment badly or no revision.	重调联轴器 Readjust coupling.
	配管振动 Piping vibration.	增加管支承 Increase the tube support.
	泵基础不结实，或灌浆不正确 Pump foundation is not solid, or incorrect grouting.	重建基础 Rebuild the foundation.
	轴承损坏 Bearing damage.	更换轴承 Change bearing.
	出水量太小 Small water outlet.	调整出口阀至规定流量 Adjust outlet valve to regular flow.
	出水量太大 Big water outlet.	调整出口阀至较小流量 Adjust outlet valve to smaller flow,
	吸入管把空气带进泵里 Air suction into the pump.	检查、修理吸水管 Check and repair the suction pipe.
	叶轮堵塞 Clogging of the pump.	清楚异物 Remove the clogging things.
轴承温度太高 Bearing temperature is too high.	润滑油不足 Less lubrication oil.	加润滑油
	润滑油太多 Too much lubrication.	放掉多余润滑油
	用错润滑油 Wrong lubrication.	更换润滑油
	润滑油太脏或变质 Lubrication oil is dirty or deterioration.	更换润滑油 Change the lubrication oil.
	泵振动太大 Too much vibration.	参看‘强烈振动或噪音大 ’并作调整 Viewing above.
	轴承损坏 Bearing damage.	更换轴承 Change bearing
机械密封泄漏 Leakage of mechanical seal.	机械密封安装方法不正确 Installation method is incorrect.	检查机械密封，正确安装机械密封 Check mechanical seal
泵内发生汽蚀 Pump cavitation	泵振动过大 Too large vibration.	找出振动原因并调整 Identify causesand adjust.
	选错密封型号 Wrong seal model.	请与专家商量选用合适的密封形式 Call us.
	配管不正确 Wrong pipe.	同专家商量，更改配管型号 Call us.
	泵的 NPSH 太高 NPSH is too high.	同我们的专家商量解决 Call us.
	吸入高度太高 Suction head is too high.	同我们的专家商量解决 Call us.
	浆料温度太高 Liquid temperature is too high.	降低浆的温度 Cooling the liquid temperature.