

ZW系列自吸式无堵塞排污泵

ZW SELF-PRIMING NON-BLOCK SEWAGE PUMP



诚信 创新
卓越 效率

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经销商:

公司简介
ABOUT SHINMAYWER

沅泰龙流体机械(江苏)有限公司是一家集科、工、贸于一体的给排水系统设备，各种泵系列的专业制造企业。企业通过ISO9001国际质量认证体系，先后获得了饮用水卫生许可证、煤矿等重要领域的生产许可证；荣获消防3CF认证、CE认证、工程建设推荐产品证书、国际康居师范工程推荐产品、守合同重信用企业、合同信用A级证书等多项荣誉称号。

主要产品：本公司所生产的主要系列产品有离心泵、蜗壳泵、排污泵、自吸泵、隔膜泵、给水设备、螺杆泵等。并在建筑行业、石油化工行业、制药行业、环保事业、消防送水、城市给排水、国防领域等工程设施中得到了广泛的应用。

沅泰龙流体机械(江苏)有限公司本着“诚信、创新、卓越、效率”的企业精神，始终以客户满意为宗旨，严把质量关，积极开拓创新，与时俱进，不断地完善自己，提升市场竞争力，铸就“沅泰龙”品牌！



产品概述

ZW系列自吸式无堵塞排污泵是在反复研究国内外同类技术的基础上开发成功的一种结构新颖的产品。该泵集自吸和无堵塞排污于一体，采用轴向回流外混式，并通过泵体、叶轮流道的独特设计，即可象一般自吸清水泵那样不需要安装底阀和灌引水，又可吸排含有大颗粒固体和长纤维杂质液体，可广泛适用于市政排污工程、河塘养殖、轻工、造纸、纺织、食品、化工、电业、纤维、浆料和混合悬浮等化工介质最理想的杂质泵。

该泵与国内同类产品相比，具有结构简单、自吸性能好、排污能力强、高效节能，使用维修方便等特点，在排污泵系列产品中属国内首创。各项技术性能指标居国内领先，达到国际先进水平，具有广阔的应用市场和发展前景。

Overview

ZW series self-priming non-block sewage pumps are originally structured products developed on the basis of the repeated study in the congener technology at home and abroad.

Featured by self-priming and non-block sewage discharge, axial back flow outer recirculation, and the distinctive design of pump body and impeller channel, this pump, just like a self-priming clean water pump, doesn't need bottom valve and priming water, and is functioned to suck in and discharge liquid containing large granular solids and long fibre. It is an optimal trash pump to deliver fibre, slurry and suspending mixture in the fields of municipal sewage discharge project, aquaculture, light industry, papermaking, textile, foodstuff, chemical, electric power etc.

Compared with the similar products at home, this series of pumps are a creation of sewage pump at home, which are featured by simple structure, sound self-priming performance, robust sewage discharge capacity, high efficiency, energy conservation, easy operation and maintenance etc. With their technical performance taking a leading position both at home and in the international, this series of pumps expect a broad market in the future.

型号意义 Model Meaning



工作条件

- 1、环境温度 $\leq 50^{\circ}\text{C}$ ，介质温度 $\leq 80^{\circ}\text{C}$ ，特殊要求可达 200°C 。
- 2、介质PH值：铸铁材质为6-9，不锈钢为2-13。
- 3、介质重度：不超过 1240kg/m^3 。
- 4、自吸高度：不能超过规定值4.5-5.5米，吸入管长度为 $\leq 10\text{米}$ 。
- 5、通过能力：悬浮颗粒直径为泵口径的60%，纤维长度为泵口径的5倍。

Working Conditions

1. Ambient temperature $\leq 50^{\circ}\text{C}$, temperature of medium $\leq 80^{\circ}\text{C}$ up to 200°C in case of special requirement.
2. PH value of medium: 6-9 for cast iron material, and 2-13 for stainless steel material.
3. Gravity of medium: not exceeding $1,240\text{kg/m}^3$.
4. Self-priming height: not exceeding the specified value by 4.5-5.5m, and the length of suction pipe less than 10 meters.
5. Throughput capacity: the diameter of suspending particles not exceeding the 60% of pump diameter, and the length of fibre less than the 5 times of pump diameter.

结构及工作原理 Structural and Working Principle

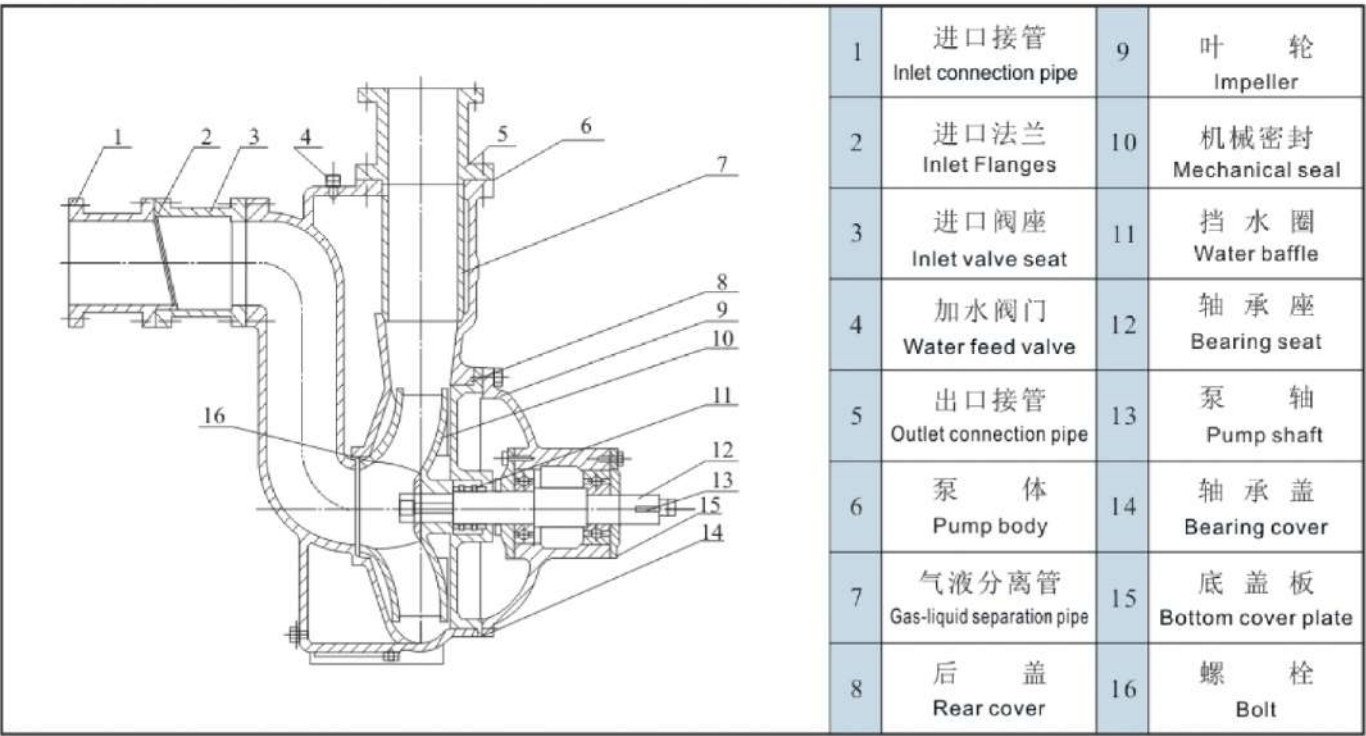
ZW系列自吸式无堵塞排污泵，主要由泵体，叶轮、后盖，机械密封、泵轴、轴承座、进口阀、气液分离管、加水阀门、进、排接管等组成。泵的结构见图。

泵的工作原理：泵体内设有储液腔，并通过上方的回流孔和下方的循环孔与泵工作腔相通，构成泵的轴向回流外混式系统。泵停止工作后，泵内腔已储有一定容积的液体。当泵启动时，泵内的储液在叶轮的作用下，夹带着空气被向上抛出，液体通过气液分离管的网格回流到工作腔，气体被排出泵。

ZW series self-priming jamming-free sewage pump mainly consists of such parts as pump body, impeller, rear cover,mechanical seal, pump shaft, bearing seat, inlet valve, gas liquid separation pipe, water feed valve and inlet and outlet connection pipes. See the drawing for its structure.

The pump,s working principle: the pump is provided with a liquid storage chamber inside. which is connected to the pump's working chamber through the upper return port and the lower circulation port. thus forming its axial reflux external mixing system. After the pump stops working, a certain volume of liquid has been stored in the pump, s inner chamber. When the pump is started.. that storage liquid will be tossed up along with the air under the action of the impeller. The liquid will flow back to the working chamber through the gas-liquid separation pipe's meshes while the gas will be discharge out of the pump so that a certain degree of vacuum comes into being inside the pump to achieve the self-priming function.

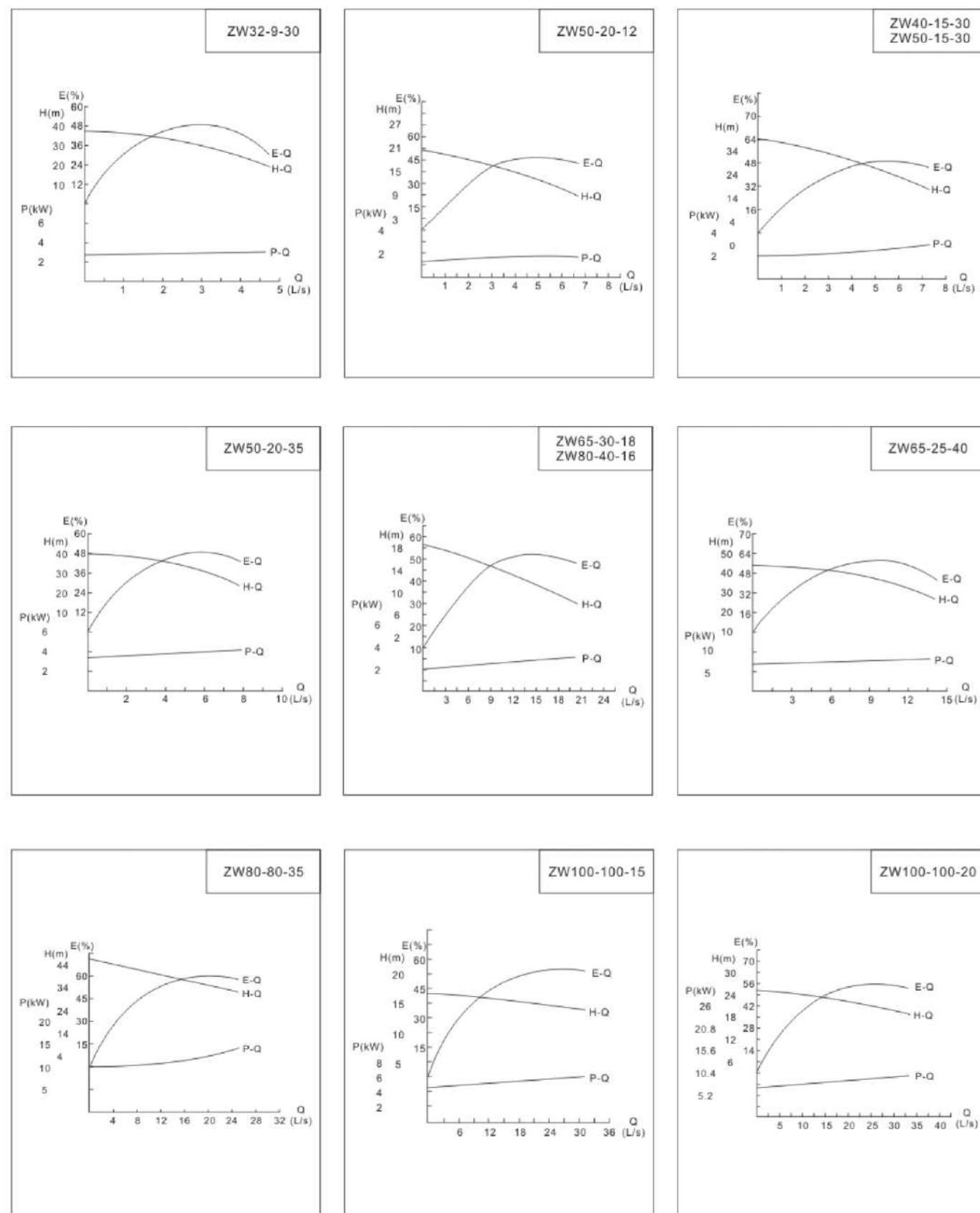
泵的结构图 Pump Structural Drawing



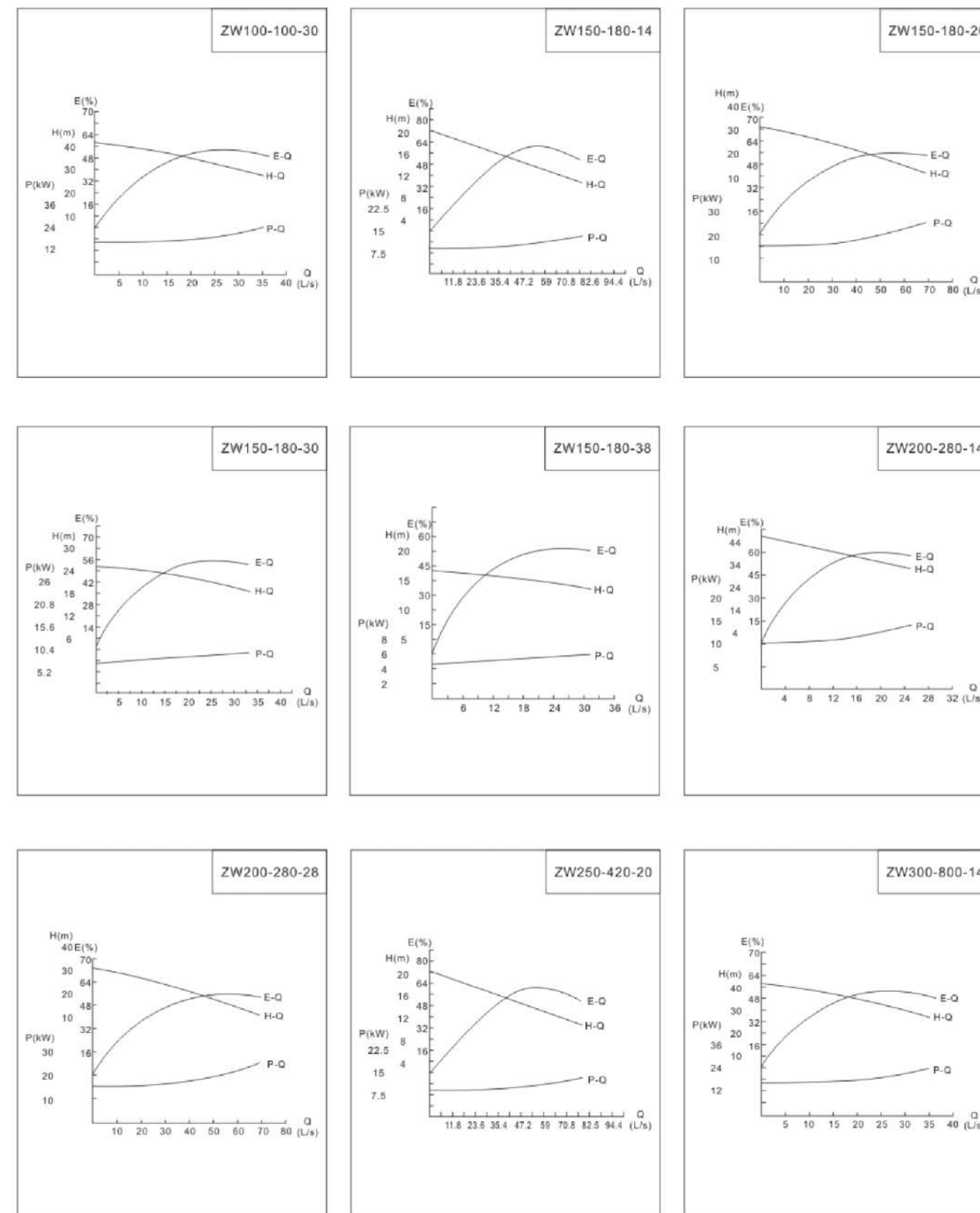
性能参数表 Performance Parameters

序号 No.	型 号 Type	口 径 Calibre	流 量 Capacity	扬 程 Head	功 率 Power	转 速 Speed	自吸高度 Self-piming Height
		(mm)	(m³/h)	(m)	(kW)	(r/min)	(m)
1	ZW25-8-15	25	8	15	1.5	2900	5.5
2	ZW32-5-20	32	5	20	2.2	2900	5.5
3	ZW32-10-20	32	10	20	2.2	2900	5.5
4	ZW32-9-30	32	9	30	3	2900	5.5
5	ZW32-20-12	32	20	12	2.2	2900	5.5
6	ZW40-10-20	40	10	20	2.2	2900	5.5
7	ZW40-20-15	40	20	15	2.2	2900	5.5
8	ZW40-15-30	40	15	30	3	2900	5.5
9	ZW50-10-20	50	10	20	2.2	2900	5.5
10	ZW50-20-12	50	20	12	2.2	2900	5.5
11	ZW50-15-30	50	15	30	3	2900	5.5
12	ZW65-15-30	65	15	30	3	2900	5.5
13	ZW65-20-14	65	20	14	2.2	2900	5.5
14	ZW65-30-18	65	30	18	4	1450	5.5
15	ZW65-25-30	65	25	30	5.5	2900	5.5
16	ZW65-25-40	65	25	40	7.5	2900	5.5
17	ZW65-40-25	65	40	25	7.5	2900	5.5
18	ZW65-65-25	65	65	25	7.5	2900	5.5
19	ZW65-30-50	65	30	50	11	2900	5.5
20	ZW80-40-16	80	40	16	4	1450	5
21	ZW80-40-25	80	40	25	7.5	2900	5.5
22	ZW80-25-40	80	25	40	7.5	2900	5.5
23	ZW80-65-25	80	65	25	7.5	2900	5.5
24	ZW80-80-35	80	80	35	15	2900	5.5
25	ZW80-40-50	80	40	50	18.5	2900	5.5
26	ZW80-50-60	80	50	60	22	2900	5
27	ZW80-80-45	80	80	45	22	2900	5
28	ZW100-100-15	100	100	15	7.5	1450	5.5
29	ZW100-80-20	100	80	20	7.5	1450	5.5
30	ZW100-100-20	100	100	20	11	1450	5.5
31	ZW100-100-30	100	100	30	22	2900	5.5
32	ZW100-80-45	100	80	45	30	2900	5.5
33	ZW100-80-60	100	80	60	37	2900	5.5
34	ZW125-120-20	125	120	20	15	1450	5.5
35	ZW125-200-15	125	200	15	15	1450	5.5
36	ZW150-200-15	150	200	15	15	1450	5
37	ZW150-180-20	150	180	20	22	1450	5
38	ZW150-180-30	150	180	30	37	1450	5
39	ZW150-180-38	150	180	38	55	1450	5
40	ZW150-250-25	150	250	25	45	2900	5
41	ZW200-280-14	200	280	14	22	1450	5
42	ZW200-280-20	200	280	20	37	1450	5
43	ZW200-300-25	200	300	25	45	1450	5
44	ZW200-280-28	200	280	28	55	1450	5.2
45	ZW250-420-20	250	420	20	55	1450	4.5
46	ZW300-800-14	300	800	14	55	1450	4.5

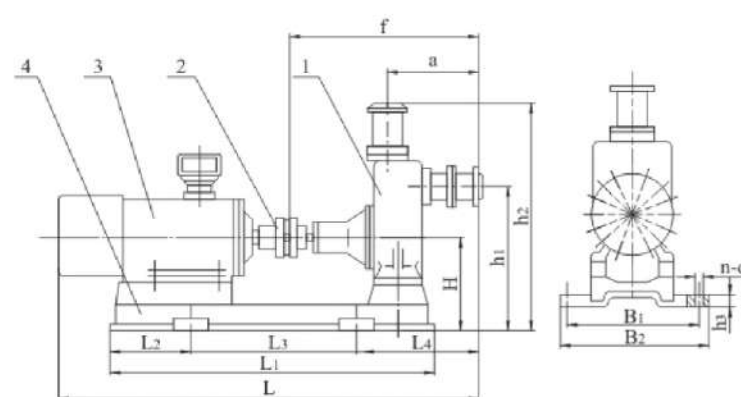
性能曲线 Performance Curve



性能曲线 Performance Curve



外形及安装尺寸表 Overall Mounting Dimensions



- 1、泵 Pump
- 2、联轴器 Coupling
- 3、电机 Motor
- 4、底座 Base

型 号 Type	L	L ₁	L ₂	L ₃	L ₄	a	f	B ₁	B ₂	H	h ₁	h ₂	h ₃	n-d
ZW25-8-15	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW32-5-20	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW32-10-20	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW32-9-30	890	710	130	450	240	260	510	310	370	238	410	630	24	4-φ18
ZW32-20-12	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW40-10-20	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW40-20-15	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW40-15-30	890	710	130	450	240	260	510	310	370	238	410	630	24	4-φ18
ZW50-10-20	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW50-20-12	850	680	115	450	240	255	510	310	370	228	410	625	24	4-φ18
ZW50-15-30	890	710	130	450	240	260	510	310	370	238	410	630	24	4-φ18
ZW65-15-30	1140	850	135	580	340	350	700	370	520	270	480	720	25	4-φ18
ZW65-20-14	1140	850	135	580	340	350	700	370	520	270	480	720	25	4-φ18
ZW65-30-18	1040	760	135	500	340	350	650	380	450	265	485	760	25	4-φ18
ZW65-25-30	1230	850	135	580	340	350	700	370	520	270	480	720	25	4-φ18
ZW65-25-40	1230	850	135	580	340	350	700	370	520	270	480	720	25	4-φ18
ZW65-40-25	1165	850	135	580	340	350	650	370	430	265	485	760	25	4-φ18
ZW65-65-25	1300	940	150	640	350	350	700	430	485	270	480	720	25	4-φ18
ZW65-30-50	1310	980	150	640	370	350	720	430	485	265	455	680	25	4-φ18
ZW80-40-16	1040	760	135	500	340	350	650	380	450	265	485	760	25	4-φ18
ZW80-40-25	1165	850	135	580	340	350	650	370	430	265	485	760	25	4-φ18
ZW80-25-40	1230	850	135	580	340	350	700	370	520	270	480	720	25	4-φ18
ZW80-65-25	1300	940	150	640	350	350	700	430	485	270	480	720	25	4-φ18
ZW80-80-35	1300	1020	190	640	360	350	700	450	520	270	480	720	25	4-φ23
ZW80-40-50	1350	1000	190	640	400	350	650	450	520	280	495	770	25	4-φ23
ZW80-50-60	1360	1020	190	640	400	350	650	450	520	280	495	770	25	4-φ23
ZW80-80-45	1360	1020	190	640	400	350	650	450	520	280	495	770	25	4-φ23
ZW100-100-15	1230	920	140	630	375	400	730	450	510	330	630	920	28	4-φ23
ZW100-80-20	1230	920	140	630	375	400	730	450	510	330	630	920	28	4-φ23
ZW100-100-20	1320	1020	200	625	420	400	730	450	510	330	630	920	28	4-φ23
ZW100-100-30	1650	1300	320	730	480	460	900	480	550	330	570	870	30	4-φ23
ZW100-80-45	1620	1180	175	820	450	430	825	500	550	325	600	840	30	4-φ23
ZW100-80-60	1620	1180	175	820	450	430	825	500	550	325	600	840	30	4-φ23
ZW125-120-20	600	1170	175	820	450	510	880	480	540	330	665	990	30	4-φ23
ZW125-200-15	1500	1200	390	700	500	390	810	520	450	330	630	880	30	4-φ23
ZW150-200-15	1500	1200	390	700	500	390	810	520	450	330	630	880	30	4-φ23
ZW150-180-20	1580	1300	200	730	500	490	870	480	550	350	700	1030	30	4-φ23
ZW150-180-30	1690	1370	235	800	500	490	870	520	600	350	700	1030	30	4-φ23
ZW150-180-38	1920	1570	245	1080	400	490	870	580	660	350	700	1020	30	4-φ23
ZW150-250-25	2020	1570	245	1080	400	490	880	580	660	350	700	1010	30	4-φ23
ZW200-280-14	1920	1470	270	970	520	650	1090	520	565	350	700	1090	30	4-φ23
ZW200-280-20	1980	1470	270	970	520	650	1090	520	565	350	700	1090	30	4-φ23
ZW200-300-25	2020	1570	245	1080	500	650	1090	580	660	350	700	1090	30	4-φ23
ZW200-280-28	2020	1570	245	1080	500	650	1090	580	660	350	700	1090	30	4-φ23
ZW250-420-20	2180	1600	325	950	720	800	1330	610	670	430	800	1200	30	4-φ23
ZW300-800-14	2580	1880	300	1280	800	1030	1500	610	655	530	900	1350	30	4-φ23

吸入口排出口法兰尺寸 Inlet and Outlet Flanges Dimensions

型 号 Type	吸入口法兰尺寸 Dimensions Of Inlet Flanges							排出口法兰尺寸 Dimensions Of Outlet Flanges						
	DN ₁	D ₁	D ₁₁	d ₁	b ₁	f ₁	n1-d01	DN ₂	D ₂	D ₁₂	d ₂	b ₂	f ₂	n2-d02
ZW25-8-15	25	100	75	60	14	2	4-φ14	25	100	75	60	14	2	4-φ14
ZW32-5-20	32	120	90	70	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW32-10-20	32	120	90	70	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW32-9-30	32	120	90	70	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW32-20-12	32	120	90	70	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW40-10-20	40	130	100	80	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW40-20-15	40	130	100	80	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW40-15-30	40	130	100	80	14	2	4-φ14	32	120	90	70	14	2	4-φ14
ZW50-10-20	50	140	110	90	14	2	4-φ14	40	130	100	80	14	2	4-φ14
ZW50-20-12	50	140	110	90	14	2	4-φ14	40	130	100	80	14	2	4-φ14
ZW50-15-30	50	140	110	90	14	2	4-φ14	40	130	100	80	14	2	4-φ14
ZW65-15-30	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-20-14	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-30-18	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-25-30	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-25-40	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-40-25	65	160	130	110	14	2	4-φ14	65	160	130	110	14	2	4-φ14
ZW65-65-25	65	160	130	110	14	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW65-30-50	65	185	145	122	20	3	4-φ17.5	65	185	145	122	20	3	4-φ17.5
ZW80-40-16	80	190	150	125	15	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW80-40-25	80	190	150	125	15	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW80-25-40	80	190	150	125	15	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW80-65-25	80	190	150	125	15	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW80-80-35	80	190	150	125	15	2	4-φ18	65	160	130	110	14	2	4-φ14
ZW80-40-50	80	200	160	133	22	3	4-φ17.5	65	185	145	122	50	3	4-φ17.5
ZW80-50-60	80	200	160	133	22	3	4-φ17.5	65	185	145	122	50	3	4-φ17.5
ZW80-80-45	80	200	160	133	22	3	4-φ17.5	65	185	145	122	50	3	4-φ17.5
ZW100-100-15	100	210	170	145	15	2	4-φ18	80	190	150	125	15	2	4-φ18
ZW100-80-20	100	210	170	145	15	3	4-φ18	80	190	150	125	15	2	4-φ18
ZW100-100-20	100	210	170	145	15	3	4-φ18	80	190	150	125	15	2	4-φ18
ZW100-100-30	100	210	170	145	15	3	4-φ18	80	190	150	125	15	2	8-φ18
ZW100-80-45	100	220	180	158	24	3	8-φ18	80	200	160	133	22	3	8-φ17.5
ZW100-80-60	100	220	180	158	24	3	8-φ18	80	200	160	133	22	3	8-φ17.5
ZW125-120-20	125	240	200	175	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW125-200-15	125	240	200	175	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW150-200-15	125	240	200	175	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW150-180-20	150	265	225	200	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW150-180-30	150	265	225	200	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW150-180-38	150	265	225	200	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW150-250-25	150	265	225	200	20	3	4-φ18	125	240	200	175	20	3	8-φ18
ZW200-280-14	200	320	280	255	22	3	4-φ18	150	265	225	200	20	3	8-φ18
ZW200-280-20	200	320	280	255	22	3	4-φ18	150	265	225	200	20	3	8-φ18
ZW200-300-25	200	320	280	255	22	3	4-φ18	150	265	225	200	20	3	8-φ18
ZW200-280-28	200	320	280	255	22	3	4-φ18	150	265	225	200	20	3	8-φ18
ZW250-420-20	250	375	335	310	24	3	12-φ18	200	320	280	255	22	3	8-φ18
ZW300-800-14	300	435	395	362	24	4	12-φ23	250	375	335	310	24	3	12-φ18

启动前的准备与运行
 Preparations Before Starting and Run

- 1、检查泵底座、联轴器、轴承座等连接部位的紧固件有否松动？如有松动应固紧。
- 2、用手转动联轴器是否有卡带或异声等现象？
- 3、打开泵上方的加水阀门，加入储液水不少于泵体容积的三分之二，关闭阀门。以后开机不需再灌引水。
- 4、接上电源试转一下，从电机端看,为顺时针转向。(严禁反转)
- 5、开机工作，观察泵运行是否正常？若有异常现象，应找出原因，加以排除。
1. Check whether fasteners on connecting parts like pump base, coupling and bearing seat are loose?If so, fasten them.
2. Rotate the coupling by hand to see whether it is seized or makes abnormal noise.
3. Open the water feed valve over the pump and feed water so that the storage liquid is not less than the 2/3 of the pump body's volume. and then close the valve. To start the pump after that, it's unnecessary to feed water again.
4. Plug in for a trial run. The rotation direction shall be clockwise when seen from the motor end (reversion is prohibited)
5. Start the pump to observe whether it runs normally. If not, find reasons and troubleshoot it.

故障与排除
 Failure Causes and Solutions

故障现象 Failure	可能产生的原因 Possible cause	排除方法 Solutions
泵不出水 No water out of pump	1、泵体内未加储液或储液不足 2、吸入管路漏气 3、电压过低 4、吸程太高或吸入管路太长 5、机械密封泄漏过大 1. No or inadequate storage liquid in pump body 2. Air leak of suction pipeline 3.Under-voltage 4.Suction lift too high or suction pipeline too long 5. Excessive leak of mechanical seal	1、加足 2、消除管路漏气现象 3、调整电压 4、降低吸程或缩短管路 5、修理或更换 1. Feed liquid to make it adequate 2. Remove the leak 3.Regulate the voltage 4. Reduce the suction lift or shorten the suction pipeline 5. Repair or replace
泵出水不足 Insufficient water flow from pump	1、因使用不当,叶轮流道或吸入管路被堵塞 2、叶轮磨损严重 3、功率不足转速太低 1.Impeller channel or suction pipeline jammed due to improper use 2. Impeller seriously worn-out 3. Underpower or rotation speed too low	1、消除堵塞物 2、更换叶轮 3、调整至额定转速 1. Remove the stemming 2. Replace the impeller 3. Adjust it to the rated speed
泵噪音、振动过大 Excessive noise or vibration of pump	1、底脚不稳 2、轴承磨损严重 3、泵与电机主轴不同轴 1.Footing instable 2. Bearing seriously worn-out 3. No coaxiality between pump and motor spindles	1、加固 2、更换轴承 3、调整同轴度 1. Reinforce it 2. Replace the bearing 3.Adjust the coaxiality
轴承温度过高 Bearing temperature too high	1、更换润滑脂 2、轴承损坏 1. Grease degraded or dried 2.Bearing damaged	1、润滑脂变质或干燥 2、更换 1. Replace the grease 2. Replace the bearing
泵泄漏 Pump leak	1、联接螺栓松动 2、密封件磨损 1.Coupling bolt loose 2. Sealing element worn-out	1、固紧 2、更换 1. Fasten it 2. Replace it



重要

操作人员在使用本产品前，请务必仔细查阅产品说明书，以确保操作安全。

IMPORTANT

Please ensure that these instructions are read and understood by machine operators before using the product

请详阅手册内容并善加保存

Please read and save this manual