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YONJOU®
PUMP & VALVE
永球泵阀科技

源于专业 精于品质 始于1989

Totally Professional And Excellent Quality Since 1989

G 型单螺杆泵

Model G Single Screw Pump

浙江永球科技有限公司

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ZHEJIANG YONJOU TECHNOLOGY CO., LTD.

COMPANY

PROFILE 公司简介



YONJOU 永球

YONJOU PUMP & VALVE is the trading name of Zhejiang YonJou Technology Co. LTD. The company was founded in 1989 with formal registration completed in 1995. With strong technical expertise, and manufacturing experience, we manufacture an extensive range of equipment. Our products are of good quality, and at reasonable prices. Our company has three branches, including Oubei branch, Huangtian branch and Qiaoxia branch. We also have many international offices, agents, and distributors.

YONJOU is manufacturing and selling oil pumps, water pumps, chemical pumps (gear pumps,

thermal conductive pumps, screw pumps, bitumen pumps, rotor pumps, diaphragm pumps, magnetic pumps, chemical pumps, submersible pumps, self priming pumps, sewage pumps and centrifugal pumps for industry and agricultural use. We also supply valves (ball valves, gate valves, stop valves, non-return valves, butterfly valves, forged steel valve), together with pipelines, electrical equipment (domestic and fire service systems) for ancillary production services. All of our pumps and valves reached JB/JQ20103-1998, JB/JQ20104-1998 standards, and have passed the ISO9001 CE certificates, patented products, etc.

All of our products are secured by PICC. We have achieved "AAA Credit rating from China Industrial and Commercial Bank" and "Famous brand pumps and valves of Zhejiang province" consistently for many years.

YONJOU has passed CE, ATEX, EAC, SGS, TUV, INTERTEK, UTS, CST and etc.

YONJOU strives to make long term relationships with suppliers and distributors. We are committed to improving the technical expertise of our staff and be an industry leader in quality and innovation.

We welcome you to visit our company and develop a strong and beneficial business relationship.

浙江永球科技有限公司始创于1989年，是一家以研发、生产、销售泵阀产品、柴油机组、成套设备为主，技术指导服务、投资等多元化经营的现代化管理企业。企业占地面积21332.3平方，拥有三大生产基地园区。

秉承着“做强做大”的精神，永球公司先后通过了ISO9001国际质量体系、欧盟CE、ATEX认证、俄罗斯EAC、SGS、BV、TUV、INTERTEK实地认证、UTS、CST、省市质检等产品检测，产品由PICC质量承保，公司连续多年来被评为：中国工行AAA资信企业、浙江省科技型企业、浙江省重合同守信用单位、浙江省诚信民营企业、浙江省泵阀业优质品牌、温州市科技创新型企业、温州安全生产标准化企业、温州驰名商标、永嘉县名牌商标、永嘉百星企业、永嘉科技项目执行单位、永嘉县企业技术研发中心等。永球作为区域率先从事泵出口企业，现产品远销美国、德国、英国、俄罗斯、韩国、日本、澳大利亚、新加坡、印尼、罗马尼亚、阿联酋、伊朗、埃及、南非、巴西等120多个国家和地区，为众多跨国公司提供产品及服务，并多次直接以永球品牌进入国内外投标工程及政府采购清单。

诚信是企业生成原则，品质是品牌的基础。永球不断的对员工培训、设备改进、技术创新、与供应商建立长期合作，把高科技多渠道的注入产品中，使得产品质量的不断提高，为广大国内外新老客户提供给更优质、更实惠的产品。永球人一贯遵循着“以科技求发展，以质量求生存，以客户求效益，力求以先进的生产管理和严格的质量要求向广大用户提供优质的产品和满意的服务”为宗旨。

向诚相待，诚信为本，欢迎广大客户来我公司实地考察、指导、洽谈业务。





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单螺杆泵

■ 概述

单螺杆泵在发达国家已广泛使用，国外多数称单螺杆为“莫诺泵”《MONOPUMPS》，德国称为“偏心转子泵”。由于其优良的性能，近年来在国内的应用范围也在迅速扩大。

该泵的最大特点是对介质的适应性强，流量平稳，压力脉动小，自吸能力高，这是其它任何泵种所不能替代的。

本单位在对国内外生产的单螺杆泵进行分析研究的基础上，博取众长，对自己的产品不断进行改革创新，目前生产的产品已自成一体，压力为0.6~1.2MPa，可满足广大用户对单螺杆泵的不同需求。

■ 应用范围

一般来说，单螺杆泵可作为一种通用泵，该泵运行速度可高可低，泵的出口额定压力可随泵的级数增加而增加，每增加一级，压力就增加0.6MPa，所以使用范围极广。

1、环境保护：工业污水、生活污水、含有固体颗粒及短纤维的污泥浊水的输送。特别适用于油水分离器、板框压滤机等设备。

2、船舶工业：轮底清洗、油水、油渣、油污水等介质的输送。

3、石油工业：输送原油，尤其是近年来成功的抽吸地下千米之深的原油与水的混合物、煤田气的成本。当油田到了后期，使用螺杆泵往地层内灌注聚合物增加油田采收率。

4、医药、日化：各种粘稠浆、乳化液、各种软膏化妆品等输送。

5、食品罐头业：各种粘稠淀粉、食油、蜂蜜、糖浆、果浆、奶油、鱼糜肉糜及其下脚料的输送。

6、酿造业：各种发酵粘稠液、浓酒糟、粮食制品渣、各种酱类、浆和含有块状固态物粘液的输送。

■ Outline

The single screw pump has been widely used in the developed countries, where it is called as Monopumps and as an Eccentric rotor pump in Germany, and, because of its good performance, the domestically applicable range has also been quickly expanded in the recent years.

The best feature of it comes as the strong suitability to a medium, stable flow, small pressure pulsation and high self-suction capacity, which can not be replaced by any other pumps.

On the basis to analyze and research the single screw pumps made in both at home and abroad, this Co. Adopts the advantages therein and makes continual reforming and creating on the one of itself, getting it in a series up till now, with the pressure as 0.6~1.2MPa, and satisfying it to the different needs of users.

■ Applicable range

In general, the single screw pump can be used as a universal one. As the moving speed of it can be either high or low and the rated pressure on the outlet of it can be increased along with the increment of the stage number, in an increment of 0.6MPa with one increased stage, so it holds an extremely wide range of use.

1.Environmental protection: to transport the industrial and living sewages, the filth and mire containing solid grains and short fibers, especially suitable for the oil-water separator, plate-and-frame filter etc. equipments.

2.Shipping industry: ship bottom cleaning, oil-water, oil dregs, oil sewage etc. media transporting.

3.Petroleum industry: to transport the raw oil, especially in the recent years, it has successfully pumped the mixture of both raw oil and water in a depth of 1000m under the ground and the mixture of both gas and water in a coal field, thus greatly lowering the costs for mechanical oil extraction, coal mining and gas production. In case of the later stage for a coal field, use of the pump to pump polymers into the substrate can enhance the recovery efficiency.

4.Medicine, daily chemicals: to transport various viscous pulps, emulated liquids, various soft-cream cosmetics.

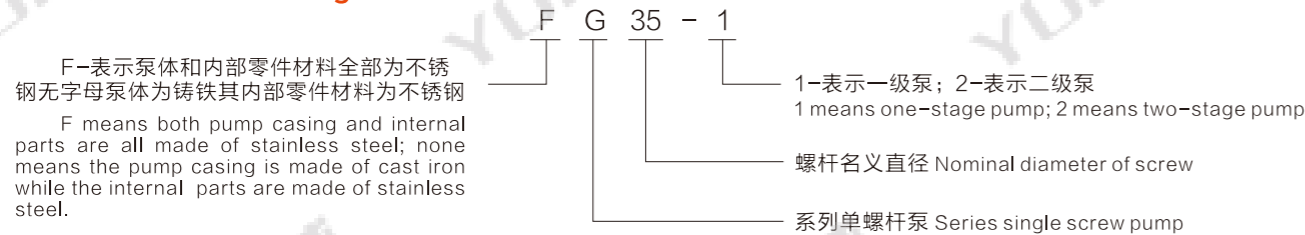
5.Food and canned food industry: to transport various viscous starches, edible oil, honey, syrup, jam, cream, smashed fish and meat and the leftover bits and pieces of them.

6.Brewing industry: to transport various fermented viscous liquids, concentric distiller's grains, food dregs, various sauces, pulps and the viscous liquid containing block solids.

7、建筑业：水泥砂浆、石灰浆、涂料及其它糊状体的喷涂与输送。
8、采矿业：矿井内含固体颗粒的污水、泥浆水等排送到地面。
9、化学工业：各种悬浮液、油脂、各种胶体浆、各种粘合剂的输送。
10、印刷、造纸工业：高粘度油墨、墙纸的PVC高分子塑料糊和各种浓度的纸浆、短纤维浆料的输送。

7. Construction industry: to transport cement mortar, lime white, coating and other paste spray-coatings.
8. Mining industry: to drain the sewage, muddy pulp containing solid grains onto the ground from a mine.
9. Chemical industry: to transport various suspended liquids, grease, various colloidal pulps and various adhesives.
10. Printing and paper-making industry: to transport high viscous inks, PVC polymeric plastic paste of wallpapers, paper pulps and short-fiber pulpy materials of various concentrations.

■ 型号意义 Model meaning



■ 工作原理和特性

单螺杆泵是按迥转啮合容积式原理工作的新型泵种，主要工作部件是偏心螺杆（转子）和固定的衬套（定子）。

由于该两部件的特殊几何形状，分别形成单独的密封容腔，介质由轴向均匀推行流动，内部流速低，容积保持不变，压力稳定，因而不会产生涡流和搅动。每级泵的输出压力为0.6MPa，扬程60m（清水），自吸高度一般在6m以上。

传动可采用联轴器直接传动，或采用调速电机、三角带、变速箱等装置变速。

这种泵零件少，结构紧凑，体积小，维修简便。转子和定子是本泵的易损件，结构简单，便于装拆。

因定子选用多种弹性材料制成，所以这种泵对高粘度流体的输送和含有硬质悬浮液颗粒介质或含有纤维介质的输送，有一般泵种所不能胜任的特性。其流量与转速成正比。

■ 使用注意事项

- 1、开机前必先确定运转方向，不得反转。
- 2、严禁在无介质情况下空运转，以免损坏定子。
- 3、新安装或停机数天后的泵，不能立即启动，应先向泵体内注入适量机油，再用管子钳扳动几转后才可启动。
- 4、输送高粘度或含颗粒及腐蚀性的介质后，应用水或溶剂进行了冲洗，防止阻塞，以免下次启动困难。

■ Working principle and performance

Because of the special geometrical shapes of the two parts, they form a sealed containable cavity of their own. The medium is axially pushed to flow evenly, the inside flow-rate is low, the volume keeps unchanged and the pressure is stable, therefore no eddy flow and stirring would occur. For each stage pump, the output pressure is 0.6MPa, the head is 60m (pure water) and the self-suction height is over 6m, in general.

Use a clutch to directly drive the pump or use a speed regulation motor, delta-belt, speed variable box etc. device to change the speed.

This pump holds less parts, a compact structure, a small volume and easy repair and both rotor and stator are the easily-worn-out parts and simply structured, easy to remove and assemble.

Because the stator is made of multiple elastic materials, so this pump holds such a performance as incompetent by the common ones for transporting high viscous fluids and the medium containing hard suspended grains or fibers, with its flow proportional to its rotary speed.

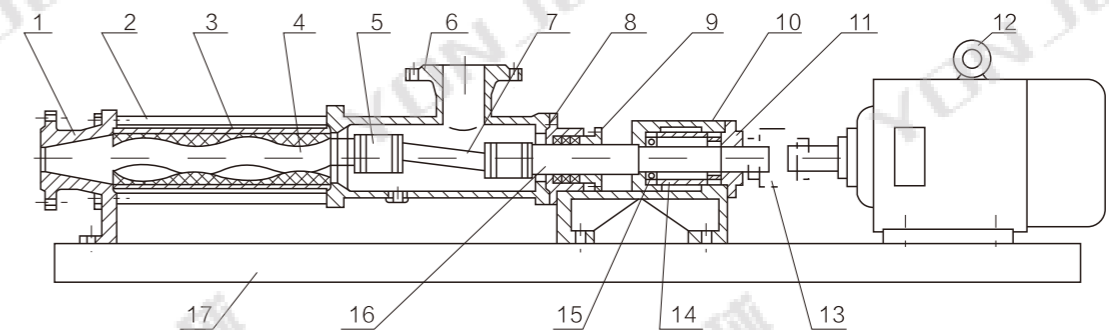
■ Cautions at use

1. First confirm the moving direction before starting, no reversed movement is allowed.
2. Prohibited from idle movement without medium so as to avoid damaging the stator.
3. Do not start the pump at once when it is newly installed or has stopped for couple of days. Instead, first prime proper engine oil into the pump and then move it for several turns with a pipe vice.
4. After transporting a high viscous or grain contained and corrosive medium, rinse it with water or solvent to prevent block-up so as to avoid difficult starting for the next time.

G型单螺杆泵 Model G Single Screw Pump

- 难。
- 5、冬季应排除积液，防止冻裂。
 - 6、使用过程中轴承箱内应定期加润滑油，发现轴端有渗流时，要及时处理或调换油封。
 - 7、在运行中发生异常情况，应立即停车检查原因，排除故障。
 5. Drain out the cumulated liquid in Winter to prevent frozen cracking.
 6. Make a periodic filling of lubricating oil into the bearing box during use and, in case of a leak from the shaft end, process it on time or replace the oil seal.
 7. In case of an abnormal condition during movement, stop it at once to check the cause and then troubleshoot.

■ 结构简图 Brief drawing of structure



1	出料腔 Discharge/Outlet	4	螺杆轴 Rotor	7	连接轴 shaft Joint	10	轴承座 Bearing lamtern	13	联轴器 Clupling	16	传动轴 Driving shaft
2	拉杆 Tie-rods	5	万向节总成 Directional node assembly	8	填料座 Sealing chamber	11	轴承盖 Bearing cover	14	轴套 Sleeve	17	底座 Base-frame
3	螺杆套 Stator	6	吸入管 Suction / Inlet	9	填料压盖 Sealing	12	电动机 Electro-motor	15	轴承 Bearings		

■ 单螺杆泵优点 Advantages with single screw pump

<p>在负压下也能输送含有气体的介质。 Can also transport the medium containing air under a negative pressure</p>	<p>可输送含有纤维物和固体颗粒的液体。 Can transport the liquid containing fibers and solid grains</p>	<p>机械振动小、无脉动、运行平稳。 Small mechanical vibration, no pulsation, stable movement</p>
<p>自吸性能好，吸入性能好。 Good self-suction and suck-in property</p>	<p>可反向输送。 Can do transportation in a reversed direction.</p>	<p>输送非常粘稠的、含水的所有介质。 Can transport very viscous, water contained all media.</p>

■ 性能参数表 Performance table

型号 Model	参数	转速 Speed (rpm)	流量 Flow (m³/h)	压力 Pressure (Mpa)	电机功率 Motor power (kw)	扬程 Head (m)	进口 Inlet (mm)	出口 Outlet (mm)	允许颗粒直径 (mm)	允许纤维长度 (mm)
G20-1		960	0.8	0.6	0.75	60	Dy25	Dy25	1.5	25
G25-1		960	2	0.6	1.5	60	Dy32	Dy25	2	30
G25-2		960	2	1.2	2.2	120	Dy32	Dy25	2	30
G30-1		960	5	0.6	2.2	60	Dy50	Dy40	2.5	35
G30-2		960	5	1.2	3	120	Dy50	Dy40	2.5	35
G35-1		960	8	0.6	3	60	Dy65	Dy50	3	40
G35-2		960	8	1.2	4	120	Dy65	Dy50	3	40
G40-1		960	12	0.6	4	60	Dg80	Dg65	3.8	45
G40-2		960	12	1.2	5.5	120	Dg80	Dg65	3.8	45
G50-1		960	20	0.6	5.5	60	Dg100	Dy80	5	50
G50-2		960	20	1.2	7.5	120	Dg100	Dy80	5	50
G60-1		960	30	0.6	11	60	Dy125	Dy100	6	60
G60-2		960	30	1.2	15	120	Dy125	Dy100	6	60
G70-1		720	45	0.6	11	60	Dy150	Dy125	8	70
G70-2		720	45	1.2	18.5	120	Dy150	Dy125	8	70
G85-1		720	65	0.6	15	60	Dy150	Dy150	10	80
G105-1		500	100	0.6	22	60	Dy200	Dy200	15	110
G135-1		400	150	0.6	37	60	Dy250	Dy250	20	150

请注意

- 性能表的试验数据以20℃的清水为介质，粘度是1mm²/S。
- 当泵输送高粘度式有颗粒的介质时，根据介质的性质，泵的转速必须不同。
- 当泵输送不同磨损性介质时，泵的转速也必须不同。

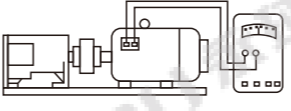
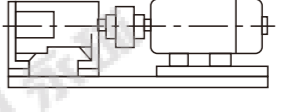
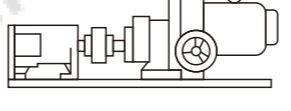
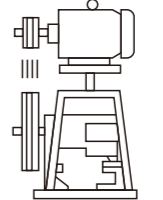
■ 根据介质粘度选择泵的转速 Select the pump speed according to the medium viscosity

介质粘度	1-1000(CSt)	1000-10000(CSt)	10000-100000(CSt)	100000-1000000(CSt)
转速 Speed	600-1000	300-600	200-400	20-100

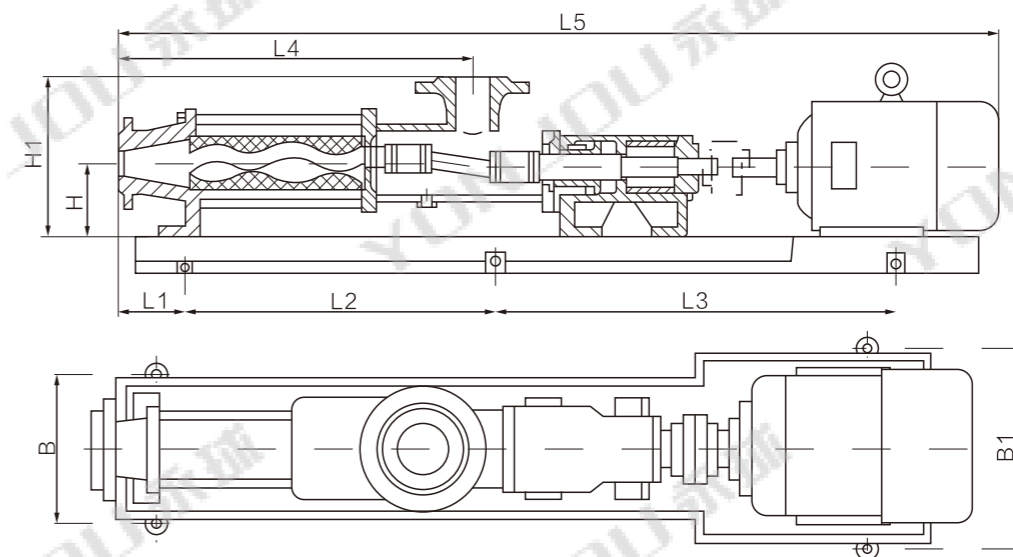
■ 根据介质的磨损性选择泵的转速 The rotational speed of the pump is selected according to the wearability of the medium

无磨损性	淡水、促凝剂、油、浆汁、肉沫、肥皂水、血液、甘油等	600-1000
一般	泥浆、工业废水、油漆颜料、粘灰浆、鱼、麦夫、菜籽油过滤后的沉积物等	300-600
严重	石灰浆、粘土、灰泥、陶土	50-200

■ 泵的驱动方式 Pump drive mode

驱动方式	说明	驱动方式	说明
	由弹性联轴器联接和变频调速电机驱动方式		由弹性联轴器联接和定转速普通电机驱动方式
	由弹性联轴器联接和无极变速器驱动方式		背包式电机皮带驱动方式

■ 安装尺寸图及尺寸表 Installation dimension diagram and table



型号 Model	L1	L2	L3	L4	L5	H	H1	B	B1	φ
G20-1	93		545	220	800	130	195	125	160	φ14×4
G25-1	135		800	325	1140	145	250	160	180	φ14×4
G25-2	110		935	460	1280	160	260	160	200	φ14×4
G30-1	105		935	340	1170	160	265	160	200	φ14×4
G30-2	135	650	460	550	1505	195	315	200	245	φ16×6
G35-1	130	475	530	430	1385	200	315	205	245	φ16×6
G35-2	140	485	715	620	1610	215	340	200	245	φ16×6
G40-1	150	465	622	455	1515	200	315	205	250	φ16×6

型号 Model	L1	L2	L3	L4	L5	H	H1	B	B1	φ
G40-2	165	665	625	670	1720	215	325	210	240	φ 16 × 6
G50-1	150	575	545	490	1560	210	320	205	245	φ 16 × 6
G50-2	150	700	700	735	1975	240	380	230	295	φ 18 × 6
G60-1	150	675	700	570	1840	235	385	235	285	φ 18 × 6
G60-2	150	800	845	850	2145	240	390	240	315	φ 18 × 6
G70-1	183	720	750	685	1995	245	435	240	315	φ 18 × 6
G70-2	190	900	935	1055	2380	265	465	250	350	φ 20 × 6
G85-1	200	800	850	735	2045	280	480	260	350	φ 20 × 6
G105-1	210	870	930	885	2200	300	500	300	400	φ 20 × 6
G135-1	250	930	970	985	2300	300	510	320	450	φ 22 × 6

■ 常见故障原因及解决方法 Failure, causes and troubleshooting

故障 Failure	原因 Causes	解决方法 Troubleshooting
1、泵不能启动 Pump unable to start	<ul style="list-style-type: none"> a. 新泵转、定子配合过紧 b. 电压、电流太低 c. 介质粘度太高 	<ul style="list-style-type: none"> a. 用工具人力帮助转动几圈 b. 检查、调整 c. 稀释料液
2、泵不出液 No liquid out of pump	<ul style="list-style-type: none"> a. 旋转方向不对 b. 吸入管路有问题 c. 介质粘度太高 d. 转、定子损坏或传动部件损坏 e. 泵内异物堵塞 	<ul style="list-style-type: none"> a. 调整方向 b. 检查泄漏，打开进出口阀门 c. 稀释料液 d. 检查更换 e. 排除异物

■ 常见故障原因及解决方法 Failure, causes and troubleshooting

故障 Failure	原因 Causes	解决方法 Troubleshooting
3、流量达不到 Flow can not be got	<ul style="list-style-type: none"> a. 管路泄漏 b. 阀门未全部打开或局部堵塞 c. 转速太低 d. 转、定子磨损 	<ul style="list-style-type: none"> a. 检查修理管路 b. 打开全部阀门、排除堵塞物 c. 调整转速 d. 更换损坏零件
4、压力达不到 Pressure can not be got	<ul style="list-style-type: none"> a. 转、定子磨损 	<ul style="list-style-type: none"> a. 更换转、定子
5、电机过热 Motor overheated	<ul style="list-style-type: none"> a. 电机故障 b. 出口压力过高，电机超载 c. 定子烧坏或粘在转子上 	<ul style="list-style-type: none"> a. 检查电机、电压、电流、电频 b. 检查扬程，开足出口阀门，排除阻塞 c. 更换损坏件
6、流量压力急剧下降 Flow and pressure abruptly lower	<ul style="list-style-type: none"> a. 管路突然堵塞或泄漏 b. 定子磨损恶劣 c. 液体粘度突然改变 d. 电压突然下降 	<p>参照以上几项，逐项排除 Refer to the above one after another</p>
7、轴密封处大量泄漏液体 A great deal of liquid leak from shaft sealing	<ul style="list-style-type: none"> a. 软填料磨损 b. 机械密封损坏 	<ul style="list-style-type: none"> a. 压紧或更换填料 b. 修复或更换