



PUMPSEEN
帕普生泵业

专心、用心、放心

金属转子泵

METAL ROTOR PUMP

致力于提供全方位流体输送技术

COMMITTED TO PROVIDING COMPREHENSIVE
FLUID TRANSPORTATION TECHNOLOGY

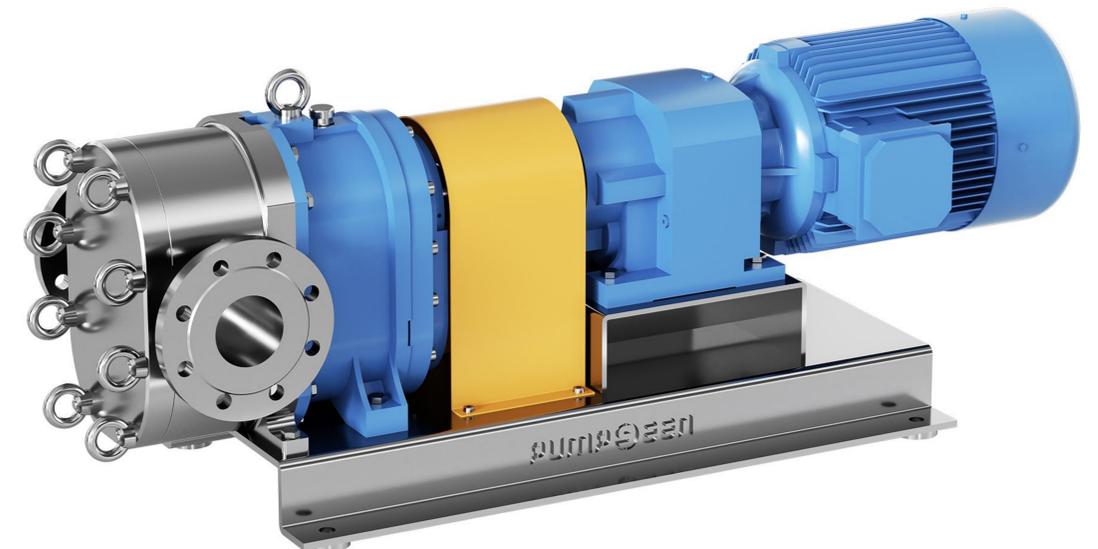
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金属转子泵

METAL ROTOR PUMP

帕普生金属转子泵的转子和泵壳均为不锈钢设计，内部光滑无死角，可实现在线清洗。可平稳无脉动输送高粘度、高腐蚀性介质，根据介质的腐蚀性、黏度、磨损性、温度等特性，选择不同形式和材质的转子能在范围内满足不同工艺需求。

Pumpseen's metal rotor pumps are designed with stainless steel rotors and pump housings, featuring a smooth internal surface with no dead corners, allowing for online cleaning. These pumps can smoothly and pulsation-free transport high-viscosity and highly corrosive media. Different rotor forms and materials are selected based on the media's corrosiveness, viscosity, abrasiveness, and temperature to meet various process requirements.

技术特点

TECHNICAL FEATURES

- ☆ 结构紧凑、占地面积小；
 - ☆ 多种材质、形式转子可选，满足不同的工艺要求；
 - ☆ 自吸能力强，启动无需灌液；
 - ☆ 结构对称，可正反双向运转，只需改变驱动旋转方向，即可改变输送方向；
 - ☆ 内衬耐磨金属衬板，延长使用寿命，降低备件成本；
 - ☆ 维修便捷，无需拆卸管路，减少停机维护时间及人力成本；
 - ☆ 多样化法兰连接形式、灵活的安装形式及管道连接设；
 - ☆ 相同型号的泵各形式和材质的转子可以互换。
-
- ☆ Compact structure, small footprint
 - ☆ Various rotor materials and forms available to meet different process requirements
 - ☆ Strong self-priming ability, no need for liquid filling to start
 - ☆ Symmetrical structure, capable of bi-directional operation by changing the drive rotation direction
 - ☆ Inner lining with wear-resistant metal liners extends service life and reduces spare parts costs
 - ☆ Convenient maintenance, no need to dismantle pipelines, reducing downtime and labor costs
 - ☆ Diverse flange connection forms, flexible installation and pipeline connection design
 - ☆ Interchangeable rotors of different forms and materials for the same pump model



参数范围

PARAMETER RANGE

01

流量范围 Flow Rate Range
1-300m³/h

02

压力范围 Pressure Range
0-16bar

03

粒径范围 Particle Size Range
可输送固体颗粒直径达70mm
Can transport solid particles up to 70 mm in diameter

04

粘度范围 Viscosity Range
1-1000000cps

05

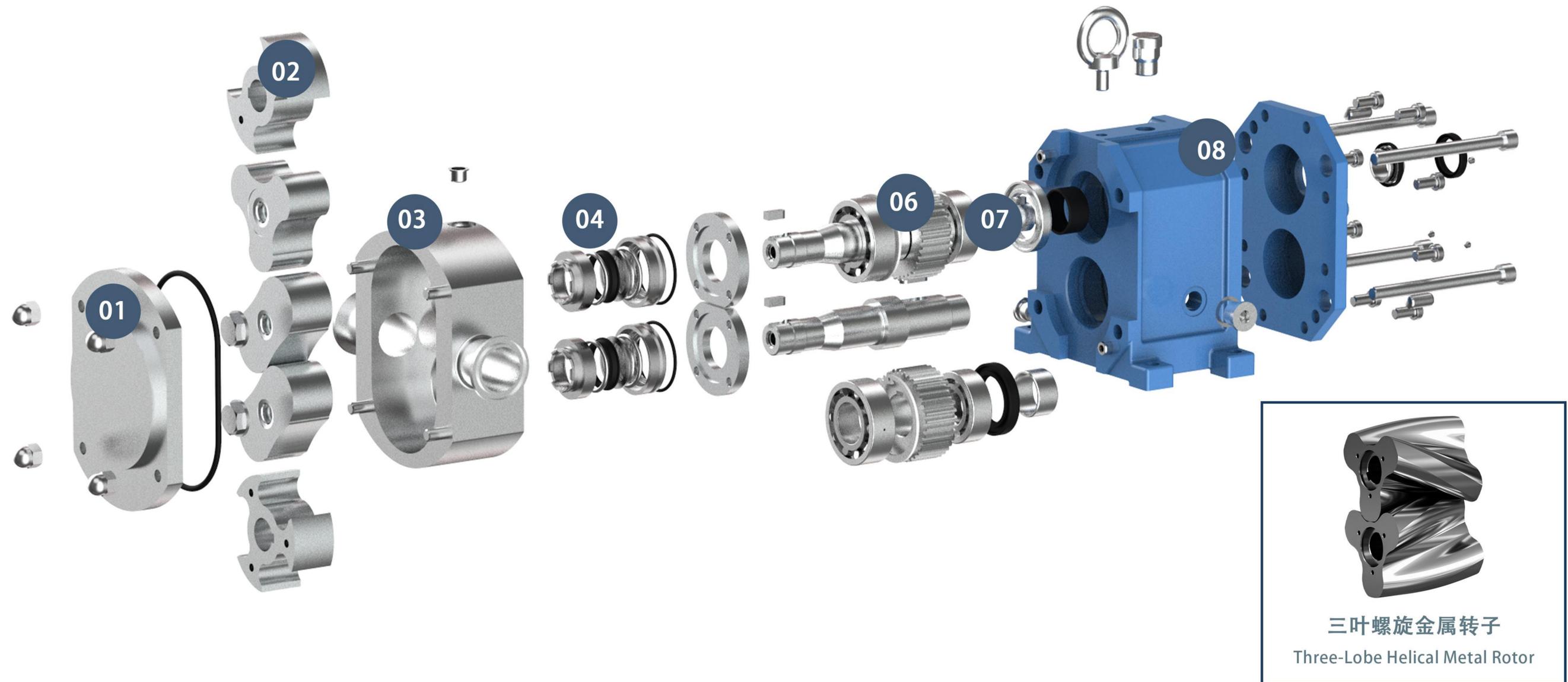
温度范围 Temperature Range
0-200℃

06

自吸能力 Self-Priming Capability
吸程可达9m
Suction lift up to 9 m

产品结构

PRODUCT STRUCTURE



01

泵盖

由四个螺母固定，方便日常的快速开启以检查泵腔内过流部件的状况，打开快启泵盖即可实现在线检修，无需拆卸管线

Pump Cover

Secured by four nuts, allowing for quick daily access to inspect overcurrent components in the pump chamber. The quick-release pump cover enables online maintenance without dismantling pipelines.

02

转子

转子可选择两叶线性、两叶螺旋、两叶蝶形、三叶线性、三叶螺旋、三叶蝶形等形式
材质可选择304、316L、2205等材质

Rotor

Available in forms such as two-lobe linear, two-lobe helical, two-lobe butterfly, three-lobe linear, three-lobe helical, and three-lobe butterfly. Materials available include 304, 316L, 2205, etc.

03

泵壳

泵壳采用整体铸造式设计，确保装配精度，通过CFD流动性能优化设计，具有较大横截面及平稳流性能，防堆积堵塞，颗粒物通过能力强

Pump Housing

Integrally cast design ensures assembly precision. Optimized for flow performance through CFD, featuring a large cross-sectional area and smooth flow characteristics, preventing clogging and ensuring strong particle passing capability.

04

机械密封

单机械密封、双端面机械密封、多唇密封、新型自润滑机械密封等并有多种冲洗方案配合，确保介质输送无泄漏

Mechanical Seal

Single mechanical seal, double mechanical seal, multi-lip seal, new self-lubricating mechanical seal, and various flushing schemes ensure leak-free media transport.

05

泵轴

传动轴与从动轴上下位置可互换，为保护泵轴而设计的密封使泵轴不与介质接触，材质采用镀层不锈钢、高铬合金钢等确保了稳定的强度

Pump Shaft

The positions of the drive shaft and driven shaft can be interchanged. Seals designed to protect the pump shaft from media contact, made from coated stainless steel, high-chrome alloy steel, ensuring stable strength.

06

同步齿轮

同步齿轮装在充满润滑油的齿轮腔内，与一对自动调心滚子轴承及一对双列圆柱滚子轴承共同组成传动系统，执行AGMA9级加工精度，材质采用碳合金钢渗碳淬火，确保强度、精度

Timing Gear

Installed in a lubricating oil-filled gear chamber, forming a transmission system with self-aligning roller bearings and double-row cylindrical roller bearings. Precision to AGMA grade 9, made from carbon alloy steel, carburized and quenched for strength and accuracy.

07

轴承

采用SKF/NSK滚子轴承，浸泡在润滑油中，减少维护、延长设备使用寿命

Bearings

SKF/NSK roller bearings immersed in lubricating oil, reducing maintenance and extending equipment life.

08

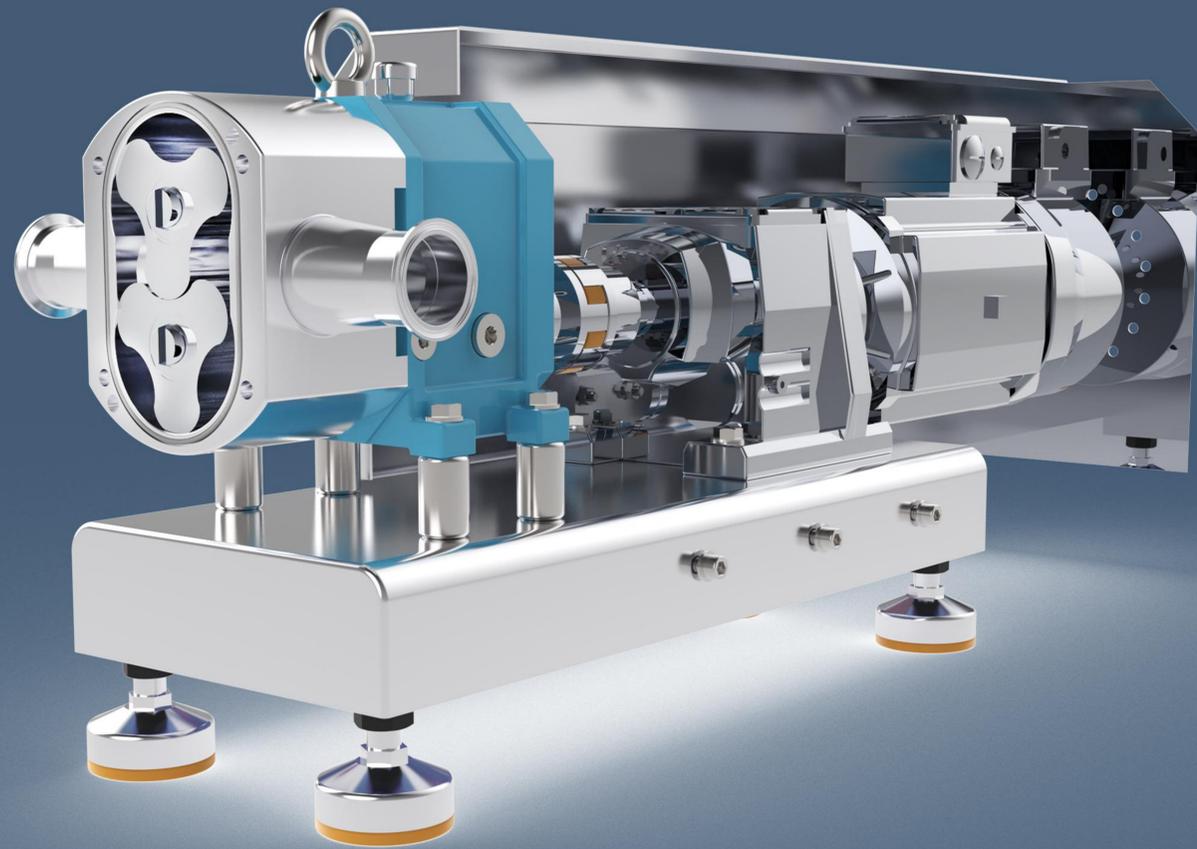
齿轮腔

Gear Chamber

三叶螺旋金属转子

Three-Lobe Helical Metal Rotor

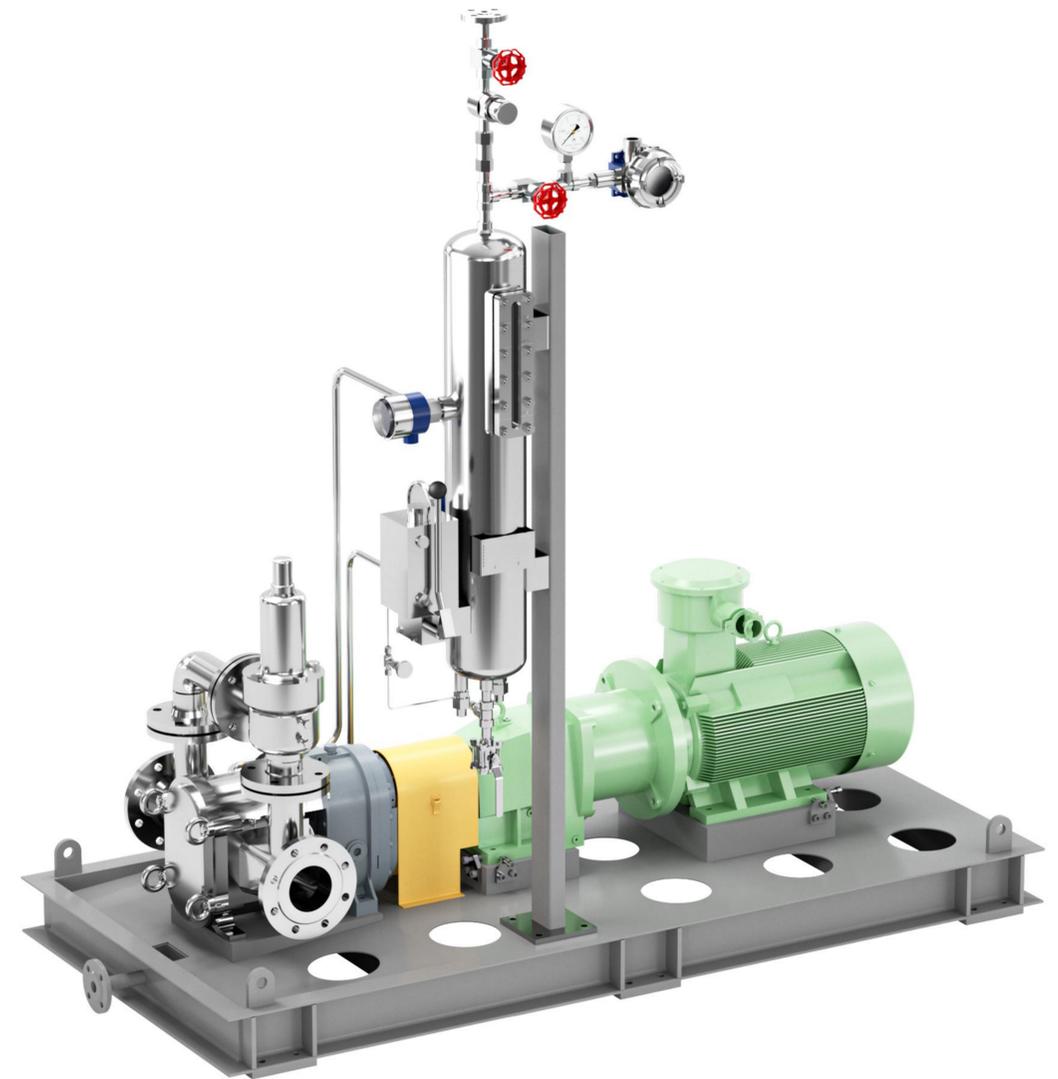
卫生系列金属转子泵 Hygienic Series Metal Rotor Pump



- ☆符合卫生级设计标准；
- ☆SIP/CIP在线清洗设计方案；
- ☆耐磨损、耐高温、耐腐蚀；
- ☆304、316L、2205等多种材质可选择；
- ☆可加加热/冷却夹套、内置安全阀等；
- ☆适用于食品饮料、医药生产等行业；

- ☆Conforms to hygienic design standards
- ☆SIP/CIP online cleaning design
- ☆Wear-resistant, high-temperature resistant, corrosion-resistant
- ☆Available in materials such as 304, 316L, 2205
- ☆Optional heating/cooling jackets, built-in safety valves
- ☆Suitable for the food and beverage, pharmaceutical production industries

石化系列金属转子泵 Chemical Series Metal Rotor Pump



案例：该客户转子泵应用于化工废水，含酸量、碱量较大，含有固体杂质，有高度腐蚀性，有毒性，易燃易爆，对泵的材质、耐磨损性、耐腐蚀性、耐酸性有极高的要求。

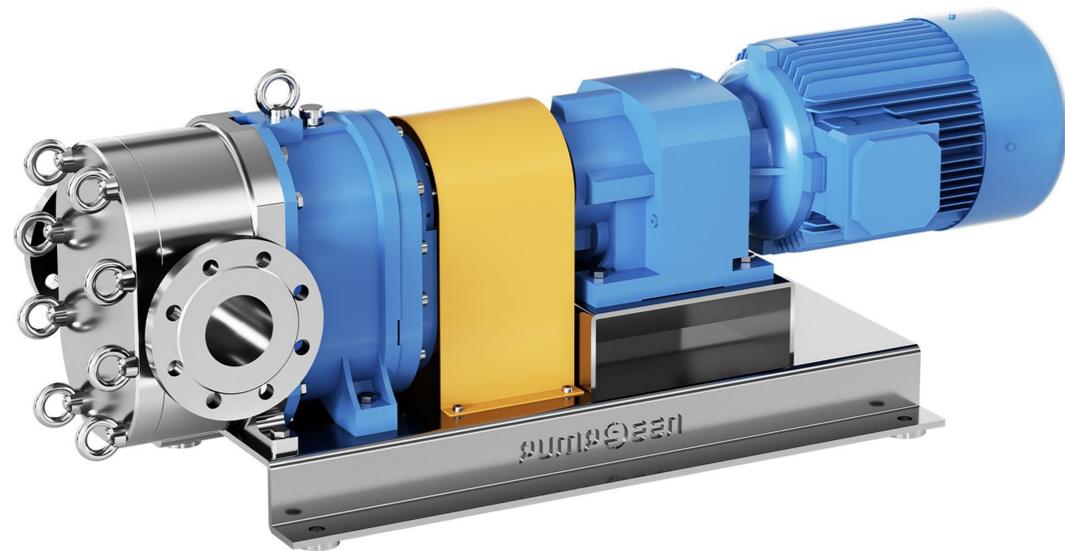
Case Study: This client uses rotor pumps for chemical wastewater, containing high levels of acids, bases, solid impurities, and highly corrosive, toxic, flammable, and explosive properties. The pump materials must meet stringent requirements for wear resistance, corrosion resistance, and acid-base resistance.

- 两叶蝶形金属转子
- PLAN53A冲洗罐
- Two-Lobe Butterfly Metal Rotor
- PLAN53A Flushing Tank
- 双端面机封
- 机封阻尼系统
- Double Mechanical Seal
- Mechanical Seal Damping System

化工系列金属转子泵 Chemical Series Metal Rotor Pump

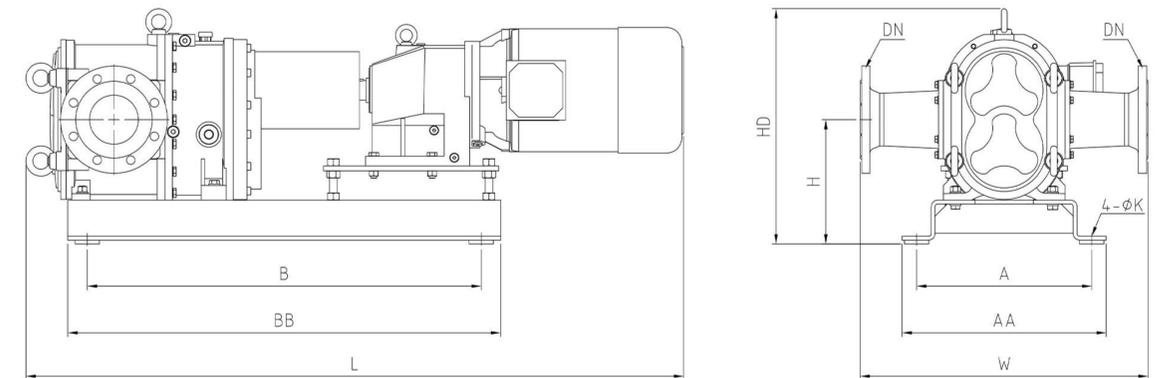
- 1, 占地面积小, 预留少量维修位置;
- 2, 保养维护不需要拆卸管道;
- 3, 转子泵是一种低转速泵, 耐磨, 易损件更换周期长;
- 4, 低剪切, 降低剪切产生火花产生的风险;
- 5, 流量与转速成正比, 几乎不随压力变化, 流量可调节范围大, 通过变频调节电机转速, 可以轻易的调节泵的输出流量;
- 6, 可输送磨损性高, 含固率高, 粘度高的介质, 颗粒通过能力强;
- 7, 可以选择配置进行保温预加热。

- 1、Small footprint, minimal maintenance space required
- 2、Maintenance does not require pipeline dismantling
- 3、Rotor pumps are low-speed, wear-resistant, and have a long replacement cycle for wearing parts
- 4、Low shear, reducing the risk of sparks caused by shear
- 5、Flow rate proportional to speed, nearly unaffected by pressure changes. Wide adjustable flow range, easily adjusted by frequency conversion of motor speed
- 6、Capable of transporting highly abrasive, high solid content, high-viscosity media, with strong particle passing capability
- 7、Optional configurations for insulation and preheating



安装参数

INSTALLATION PARAMETERS



型号	功率	A	B	H	W	K	DN	AA	BB	HD	L	重量
	[kW]	[mm]	[kg]									
PSC5	1.5	260	455	175	360	14	40	290	535	328	780	81
PSC10	2.2	260	455	175	400	14	50	290	535	328	945	99
PSC15	3	260	455	175	440	14	65	290	535	328	985	113
PSD18	3	360	810	255	550	18	80	420	890	472	1150	180
PSD36	4	360	810	255	530	18	100	420	890	472	1176	206
PSD55	5.5	360	810	255	570	18	125	420	890	472	1233	241
PSD75	7.5	360	810	255	630	18	150	420	890	472	1295	275
PSE80	11	530	1135	350	615	18	150	590	1225	630	1634	450
PSF120	15	530	1135	350	700	18	150	590	1225	661	1702	480
PSF180	18.5	530	1135	350	650	18	200	590	1225	661	1839	560
PSF240	22	530	1135	350	750	18	250	590	1225	661	1839	615
PSH320	30	540	1235	396	860	22	300	600	1335	752	2190	995
PSH650	37	540	1750	396	1200	22	350	600	1850	752	2548	1300

APPLICATION CASES

应用案例

化工生产中，日用化工、精细化工、化工化纤等类型多样化导致化工介质多样化，在输送过程中含固率、温度、黏度、剪切率、压力、稳定性等因素对输送泵的要求极高，帕普生面对挑战，研发团队多措并举，成功攻克难题。

In chemical production, the diversity of daily chemicals, fine chemicals, and chemical fibers leads to diverse chemical media. Factors such as solid content, temperature, viscosity, shear rate, pressure, and stability pose high demands on transport pumps. Pumpseen faces these challenges head-on, with the R&D team successfully overcoming obstacles through multiple measures.



CUSTOMER TREATMENT

应用行业

精细化工：燃料、涂料、颜料、添加剂、粘合剂、催化剂和各种助剂、水处理剂、农药等；
Fine Chemicals: Fuels, coatings, pigments, additives, adhesives, catalysts and various auxiliaries, water treatment agents, pesticides, etc.

日用化工：洗涤剂、香精、化妆品、牙膏、油墨、乳液、凝胶等；
Daily Chemicals: Detergents, fragrances, cosmetics, toothpaste, inks, emulsions, gels, etc.

化纤：橡胶、乳胶、化学纤维、树脂、油脂、聚氨酯等；
Chemical Fibers: Rubber, latex, chemical fibers, resins, oils, polyurethanes, etc.

造纸：聚丙烯酰胺(PAM)，碳酸钙、淀粉糊，丙苯胶乳，松香，松香胶，纸浆，填料，干强剂，湿强剂，施胶剂，消泡剂，水处理化学品等；

Papermaking: Polyacrylamide (PAM), calcium carbonate, starch paste, butylbenzene latex, rosin, rosin glue, pulp, fillers, dry strength agents, wet strength agents, sizing agents, retention and drainage aids, defoamers, water treatment chemicals, etc.

食品医药：糖浆、麦芽糖、酸奶、牛奶、饮料、淀粉糖、巧克力酱、酵母，香料食品添加剂、香料、黄油、果粒、骨渣、肉类、各种药膏、浸膏、药乳液、糖浆、细胞悬浮液等

Food and Pharmaceuticals: Syrups, maltose, yogurt, milk, beverages, starch sugar, chocolate sauce, yeast, flavor food additives, flavors, butter, fruit particles, bone residue, meat, various ointments, extracts, pharmaceutical emulsions, syrups, cell suspensions, etc.