

食品制药行业流体输送解决方案

Fluid Transportation Solutions for the Food and Pharmaceutical

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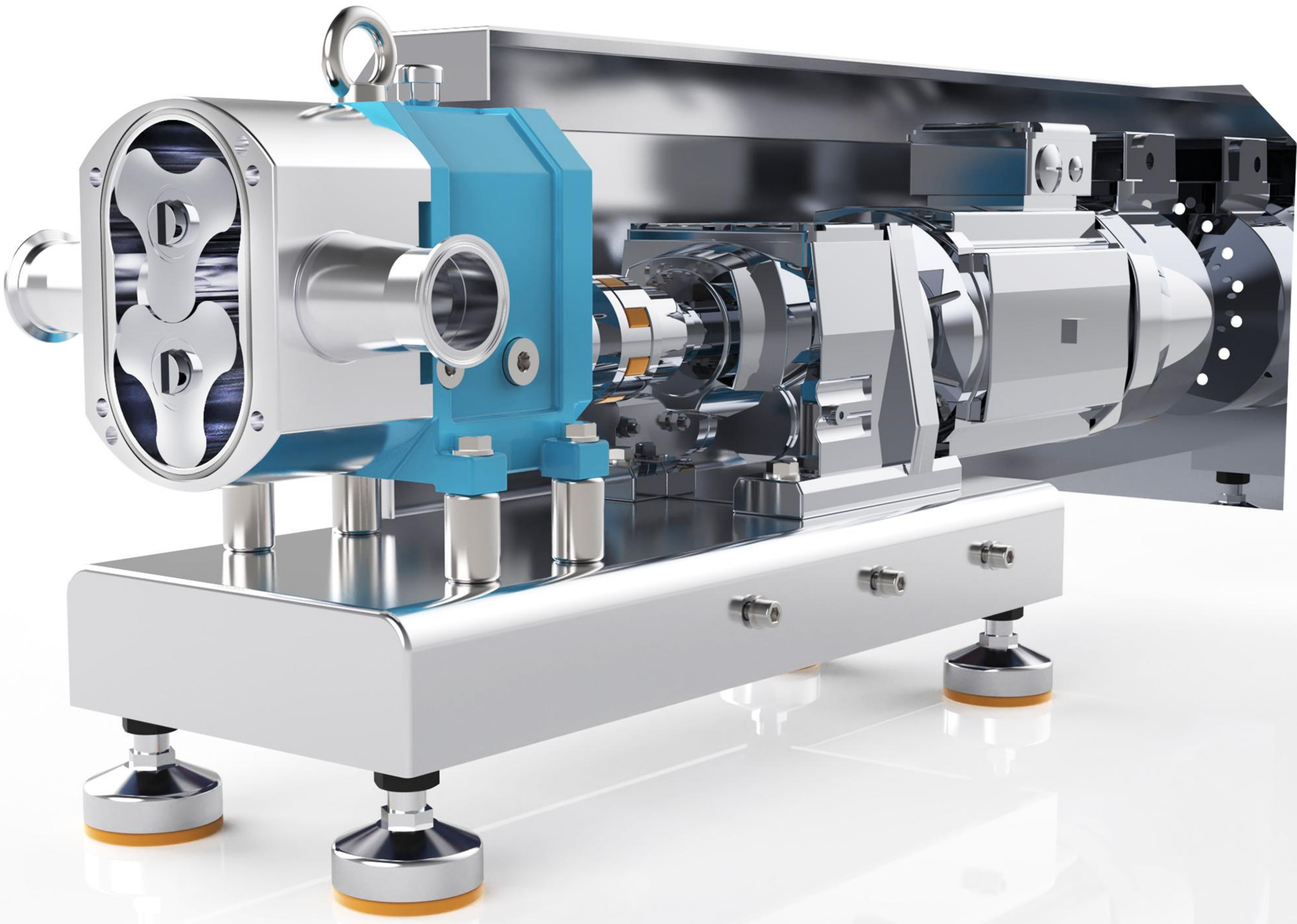


Sanitary Rotor Pump

卫生级转子泵

食品饮料 制药制剂 日用化工 精细化工

Food & Beverage Pharmaceutical Daily Chemicals Fine Chemicals



产品简介

PRODUCT INTRODUCTION

提供符合各种卫生级应用中产品所需的效率、安全性和清洁度要求的泵送解决方案。

卫生级应用出现在各行各业——从食品和饮料制造到化妆品和制药行业均有涉及。这些应用中几乎所有过程包含了原料和产品的运输，其中很多原料和产品都是液体或非牛顿流体状态，因此就需要用到泵。泵送技术的选择至关重要，它能够提升或潜在地破坏您的工艺和产品，所以选择一项合适的泵送技术就显得尤为重要。

Providing pumping solutions that meet the efficiency, safety, and cleanliness requirements of various sanitary applications.

Sanitary applications span across various industries—from food and beverage manufacturing to cosmetics and pharmaceuticals. Nearly all processes in these applications involve the transportation of raw materials and products, many of which are liquids or non-Newtonian fluids. Therefore, choosing the right pumping technology is crucial as it can enhance or potentially compromise your process and product, making the selection of the appropriate pumping technology particularly important.

卫生级转子泵 Sanitary Rotor Pump

帕普生卫生级转子泵，满足食品医药等行业卫生级别的要求，符合卫生级的在线清洗标准，内部光滑无死角，支持CIP,SIP，制造精度高，震动小，运行平稳。

Pumpseen sanitary rotor pumps meet the sanitary requirements of the food and pharmaceutical industries. They comply with sanitary online cleaning standards, with a smooth internal surface and no dead corners, supporting CIP and SIP. They are manufactured with high precision, minimal vibration, and stable operation.



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 粘度范围 Viscosity Range

1-1000000cps

04 温度范围 Temperature Range

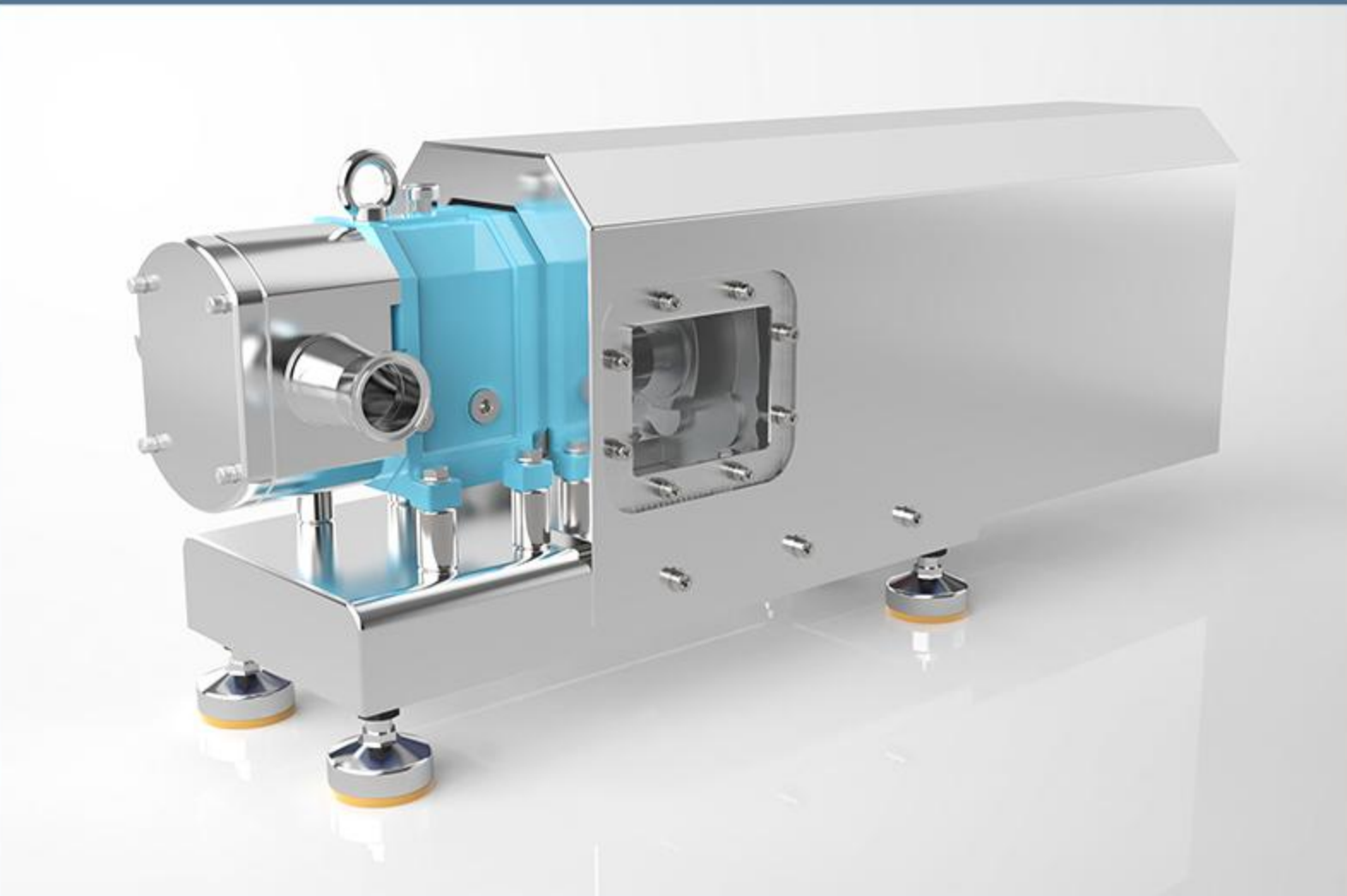
0-200℃

技术特点

FEATURES

- 符合 3A 卫生级设计设计, 内部光滑无死角, 可实现 SIP/CIP
- 过流部件材质均符合 FDA 卫生级材质认证
- 多种材质、形式转子可选，满足不同的工艺要求
- 强自吸能力，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
- 对介质剪切小，不影响介质特性
- 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形式

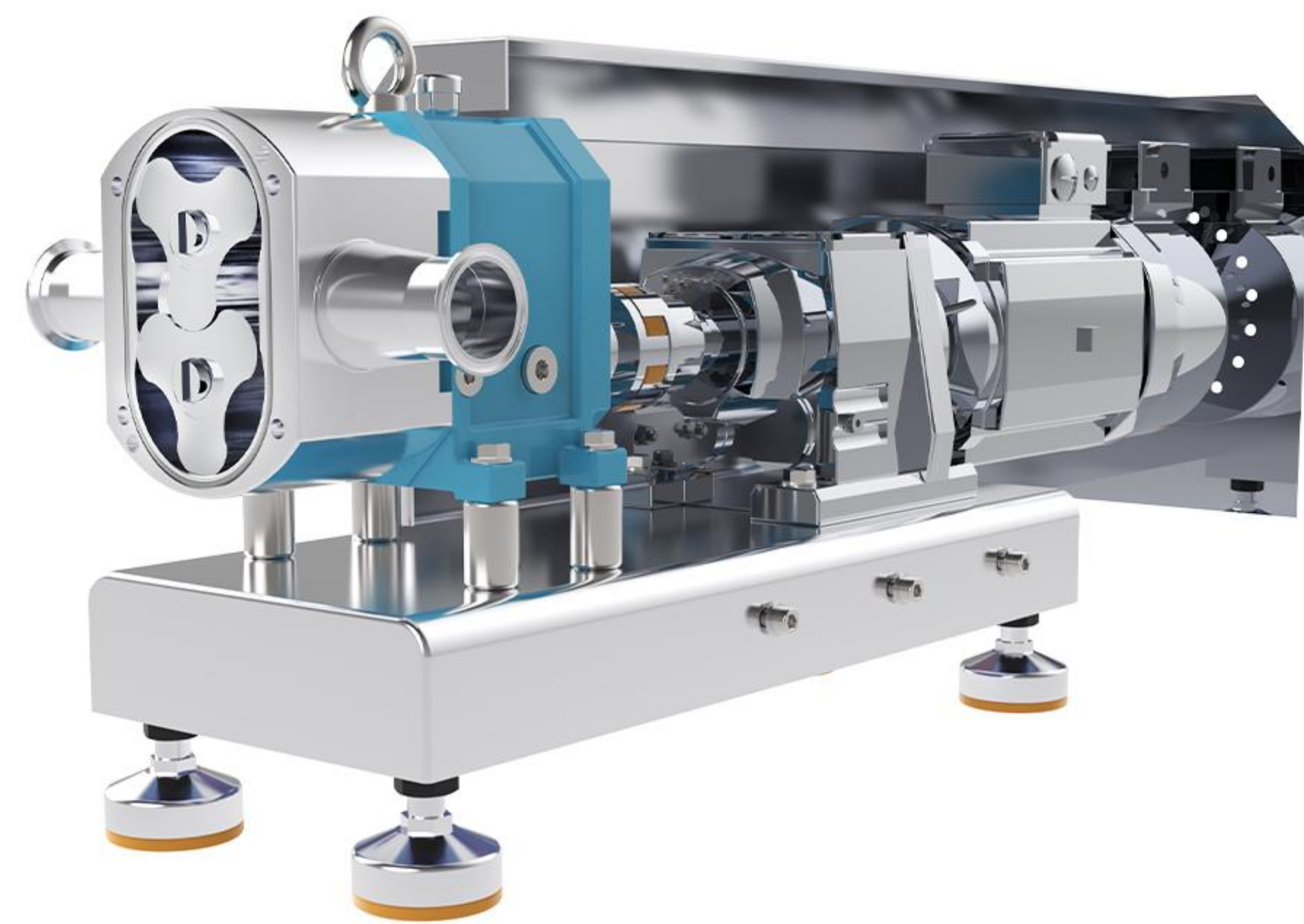
- Conforms to 3A sanitary design standards, with a smooth internal surface and no dead corners, enabling SIP/CIP.
- Overcurrent components are made of materials certified to FDA sanitary standards.
- Various rotor materials and forms available to meet different process requirements.
- Strong self-priming ability, no need for liquid filling to start.
- Symmetrical structure allows for bi-directional operation by changing the drive rotation direction.
- Minimal shear on the medium, preserving its properties.
- Convenient maintenance, no need to dismantle pipelines, reducing downtime and labor costs.
- Diverse flange connection forms, flexible installation and pipeline connection designs.



产品介绍

PRODUCT

INTRODUCTION



» 注重每一个卫生级制造细节

Attention to every detail in sanitary manufacturing.

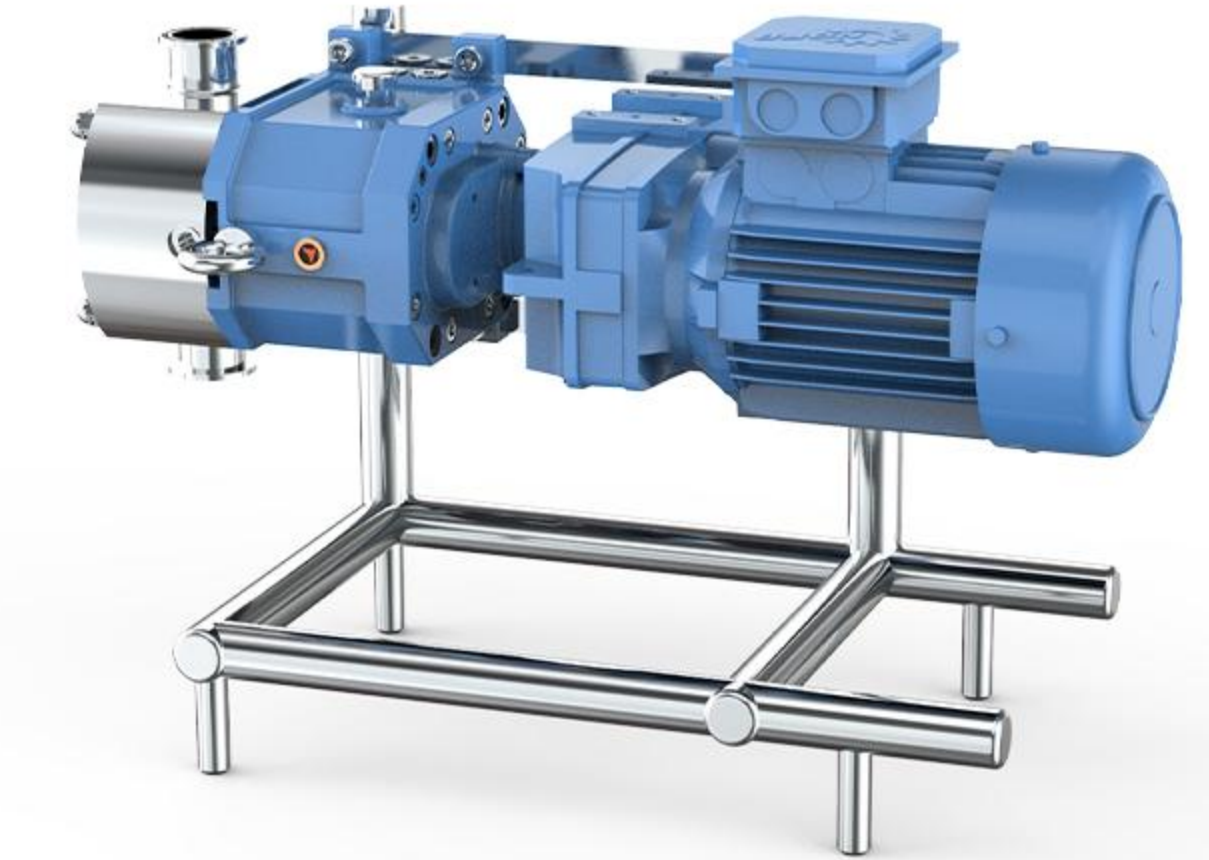
- 符合3A卫生级设计标准
- 低剪切流体输送
- 多种材质和结构选择
- 卫生泵口设计
- 隔离的齿轮箱设计
- 自吸和干转能力
- CIP在线清洗设计
- SIP在线消毒设计
- Conforms to 3A sanitary design standards
- Low-shear fluid transportation
- Various material and structure options
- Hygienic pump port design
- Isolated gearbox design
- Self-priming and dry running capability
- CIP online cleaning design
- SIP online sterilization design

» 定制化方案

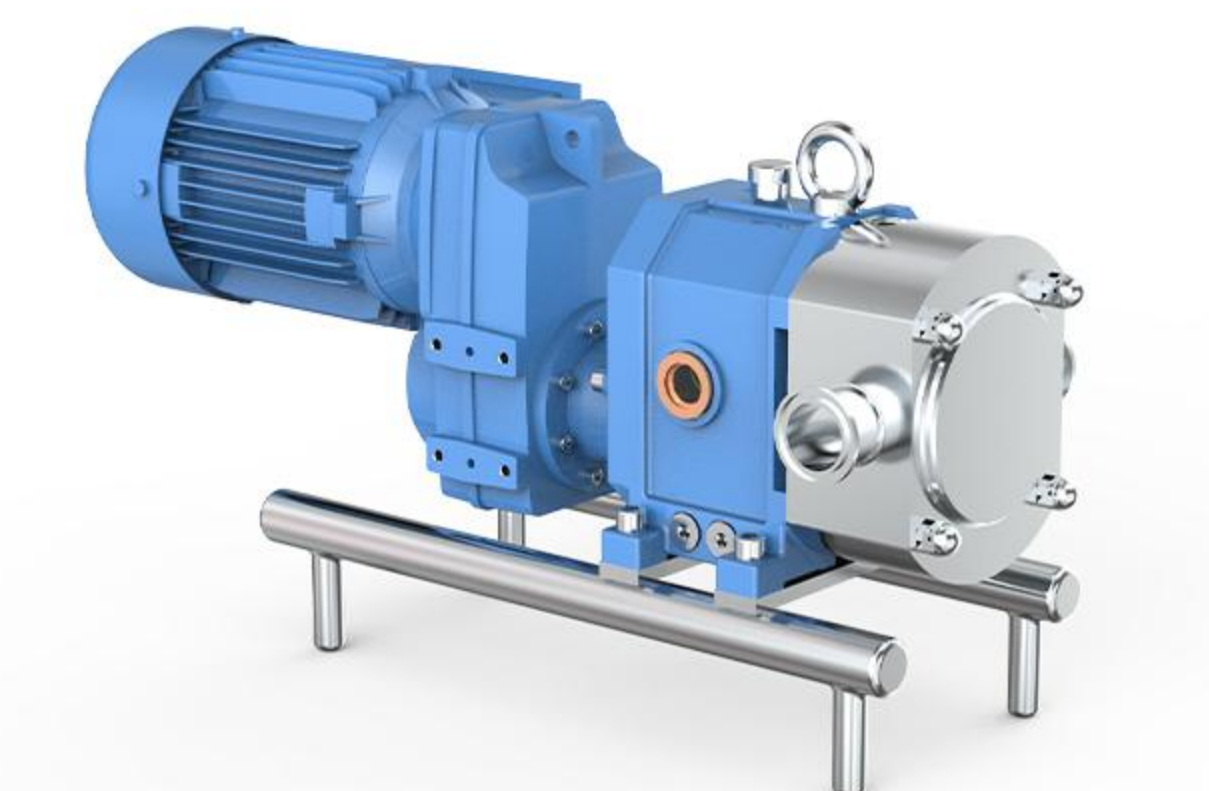
CUSTOMIZED SOLUTIONS

- 加热、冷却夹套
- 泵腔、齿轮腔隔离设计
- 宽大进出口
- 内置安全阀
- 根据不同的介质和工艺定制化设计
- Heating and cooling jackets
- Pump chamber and gear chamber isolation design
- Wide inlet and outlet
- Built-in safety valve
- Customized design based on different media and processes

多种安装方式 Various Installation Methods



上进下出
upper-lower pat



标准安装
Standard installation

- 设备和支撑结构全部密封至支撑面（地板、墙壁、柱子、天花板），确保不存在口袋和缝隙。已经尽量减少地板接触点的数量和面积。
- 设备与土建结构（地板、墙壁和天花板）之间的距离足以清洁和检查。
- 管道或设备之支架的安装已确保不会有积水或污物保持在表面或支架内。

- Equipment and support structures are sealed to the support surface (floor, wall, column, ceiling) to ensure no pockets or gaps. The number and area of floor contact points have been minimized.
- The distance between equipment and civil structures (floor, wall, ceiling) is sufficient for cleaning and inspection.
- The installation of pipelines or equipment supports ensures that no water or contaminants remain on the surface or within the supports.

结构配置

FOREST

CONCEPT

耐磨宽边转子，两叶、三叶、蝶形、螺旋等多种转子形式，多种耐腐蚀、耐磨损的材质可选，如304、316L、哈式合金等

Wear-resistant wide-edge rotors in forms such as two-lobe, three-lobe, butterfly, helical, and more. Available in materials like 304, 316L, Hastelloy, etc., offering corrosion resistance and wear resistance.

泵盖设计由四个圆环螺母固定，方便日常快速开启以检查泵腔内部过流部件状况，打开快启泵盖，即可对泵腔内主要过流部件实现在线维修，无需拆卸管线。

Designed with four ring nuts for quick daily opening to inspect overcurrent components in the pump chamber. The quick-release pump cover allows for online maintenance of the main overcurrent components in the pump chamber without dismantling pipelines.

泵盖 Pump Cover

转子 Rotor

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完全不与流体介质接触，且被润滑油保护；材质采用镀层不锈钢、高铬合金钢等确保了稳定的强度。

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

泵轴 Pump Shaft

机械密封 Mechanical Seal

单机械密封、双端面机械密封、多唇密封等并有多多种机械密封冲洗方案配合，确保无泄漏。

Single mechanical seal, double mechanical seal, multi-lip seal, and various mechanical seal flushing schemes ensure leak-free operation.

泵壳 Pump Housing

泵壳采用整体式铸造设计，保证了高的装备精度。通过CFD流动设计性能优化，具有较大横截面及平稳流性能，防堆积堵塞，通过颗粒物能力强

Integrally cast design ensures high 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.

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整个传动系统。同步齿轮执行AGMWA9级加工精度，材质采用优质低碳合金钢渗碳淬火，确保强度、精度。高强度的轴承及同步齿轮是泵稳定运转性能的保证。

Installed in a lubricating oil-filled gear chamber, forming a transmission system with self-aligning roller bearings and double-row cylindrical roller bearings. Processed to AGMA grade 9 precision, made from high-quality low-carbon alloy steel, carburized and quenched for strength and accuracy. High-strength bearings and timing gears ensure stable pump operation.

同步齿轮 Timing Gear

齿轮腔盖 Gear Chamber Cover

轴承 Bearings

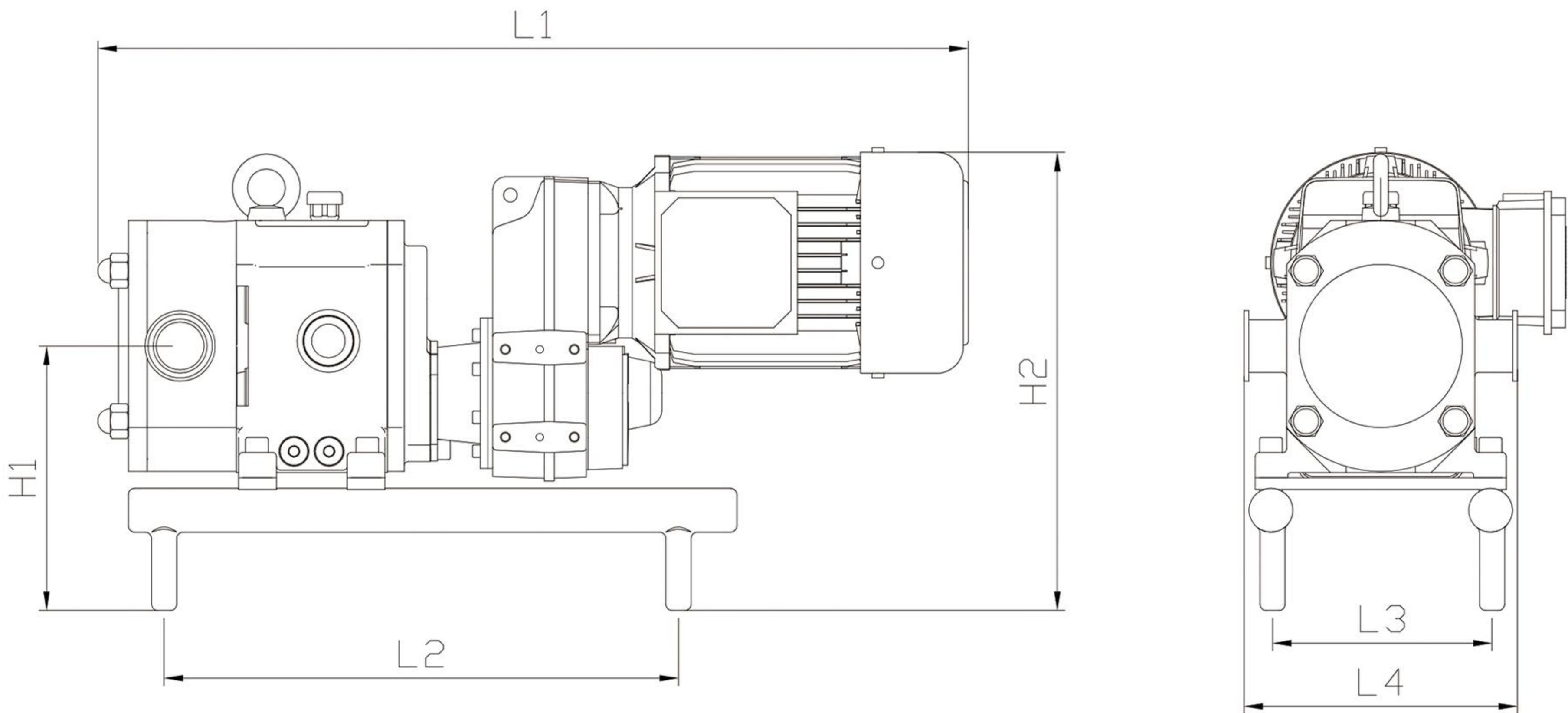
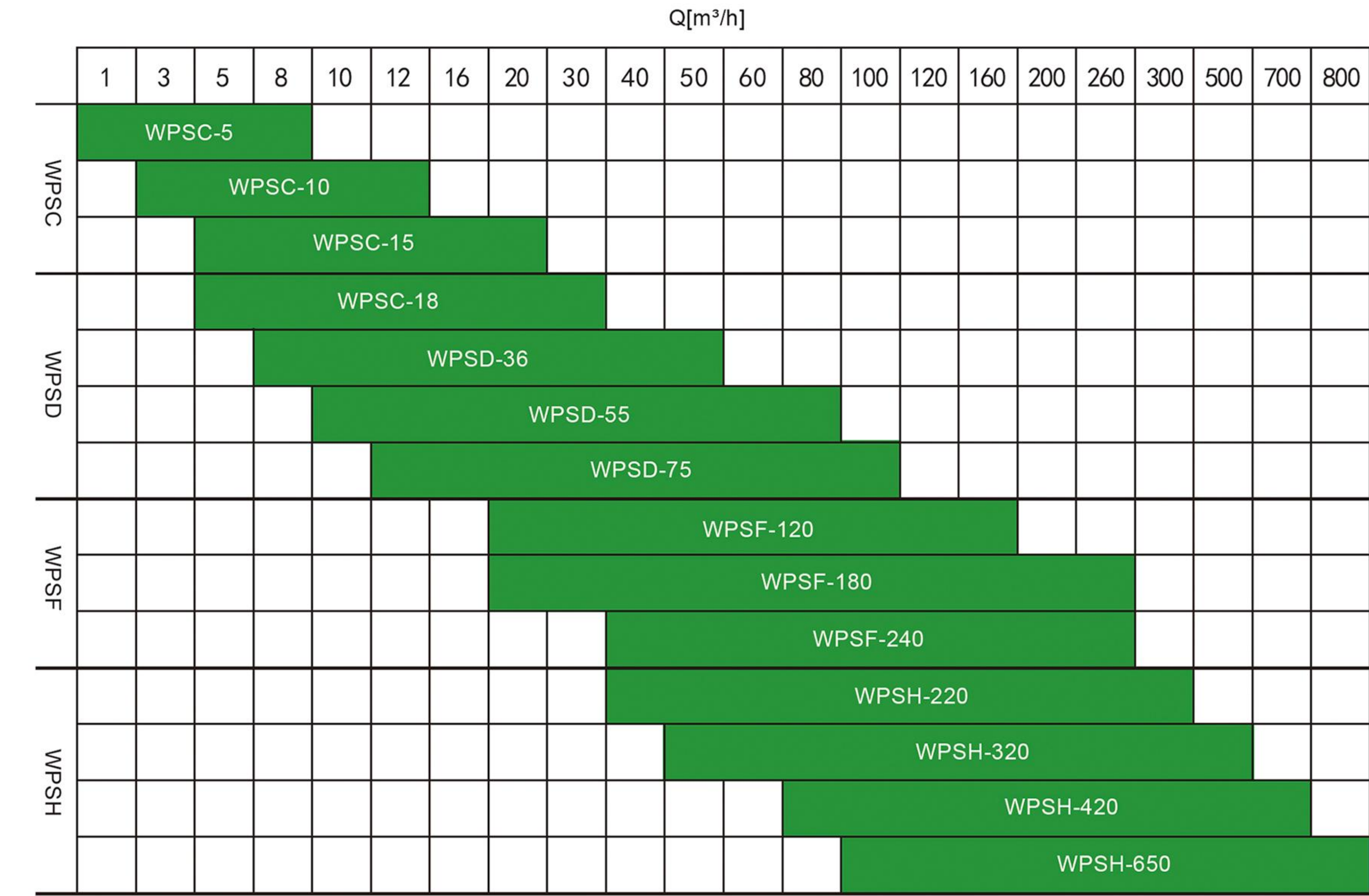
采用SKF/NSK高强度滚子轴承，轴承浸泡在润滑油中

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

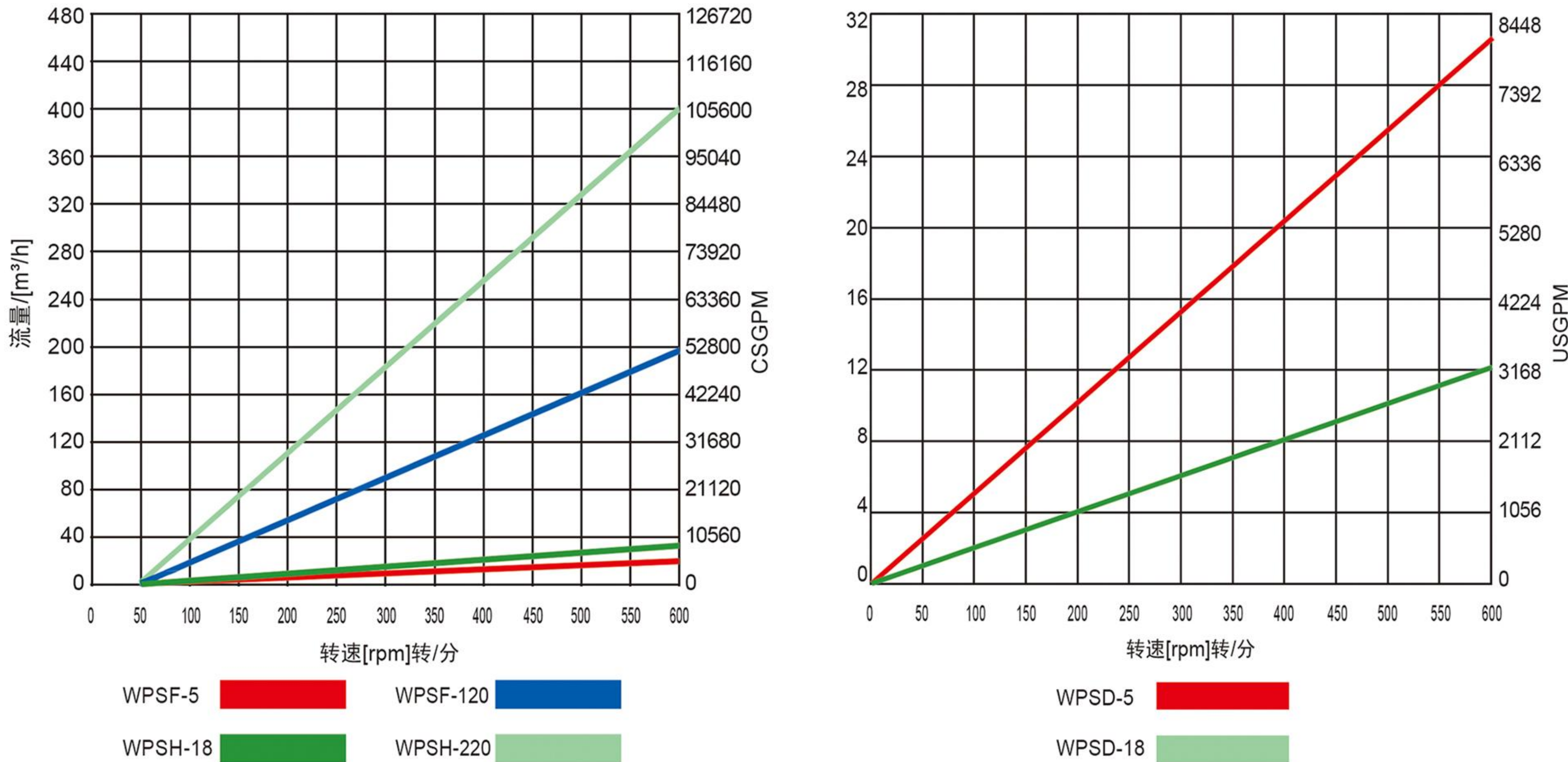
性能参数

PROPERTY

PARAMETER



型号 Model	长度 (mm) Length				高度 Height		最大粒径 (mm) maximum size	转速 (rpm) speed	流量范围 (m³/h) Flow range	排量 (L/rpm) displacement	最大压力 (bar) Maximum pressure	最高温度 (°C) Maximum temperature
	L1	L2	L3	L4	H1	H2						
WPSC-5	725	410	220	220	215	370	25	900	0.5-7.5	0.25	12	160
WPSC-10	765	410	220	235	215	380	25	900	1.5-15	0.5	8	160
WPSC-15	835	410	220	235	215	380	25	900	2-20	0.75	4	160
WPSD-18	890	600	260	310	310	480	40	600	3-25	0.9	12	160
WPSD-36	915	600	260	310	310	480	40	600	5-50	1.8	8	160
WPSD-55	1125	600	260	330	310	490	40	600	8-80	2.7	6	160
WPSD-75	1180	660	300	330	310	535	40	600	10-100	3.6	4	160
WPSF-120	1370	880	440	450	390	605	75	600	20-160	5.7	12	160
WPSF-180	1535	880	440	450	390	605	75	600	30-250	8.6	8	160
WPSF-240	1575	880	440	450	390	605	75	600	40-340	11.4	4	160
WPSH-220	1705	1000	520	620	450	685	80	600	35-300	10.3	16	160
WPSH-320	1775	1000	520	690	450	745	80	600	50-450	15.5	6	160
WPSH-420	1875	1200	520	690	450	745	80	600	70-650	22.5	4	160



应用领域

APPLICATION

AREA



糖浆、果酱、乳制品、奶油、巧克力、调味品、肉类颗粒物、果冻、食品添加剂、酒水、饮料等。

Syrups, jams, dairy products, cream, chocolate, sauces, meat particles, jelly, food additives, beverages, drinks, etc.

糖浆、营养液、中成药、膏状药剂、生物制剂、口服液、杀菌药剂、细胞悬浮液、抗菌素、胰岛素、兽药、除草剂、生物农药等。

Syrups, nutrient solutions, traditional Chinese medicine, paste medicines, biological preparations, oral liquids, sterilizing agents, cell suspensions, antibiotics, insulin, veterinary drugs, herbicides, biological pesticides, etc.

牙膏、洗涤剂、面霜、唇膏、洗面奶、洗发精、鞋油、高级化妆品、沐浴精、肥皂、凝固剂、香料及香脂等。

Toothpaste, detergents, creams, lipsticks, facial cleansers, shampoos, shoe polishes, high-end cosmetics, bath oils, soaps, coagulants, fragrances, and balms.

油漆、颜料、染料、涂料、润滑油、合成脂、润滑脂、柴油、石油催化剂、乳化沥青、改性沥青、石蜡、胶粘剂、树脂等。

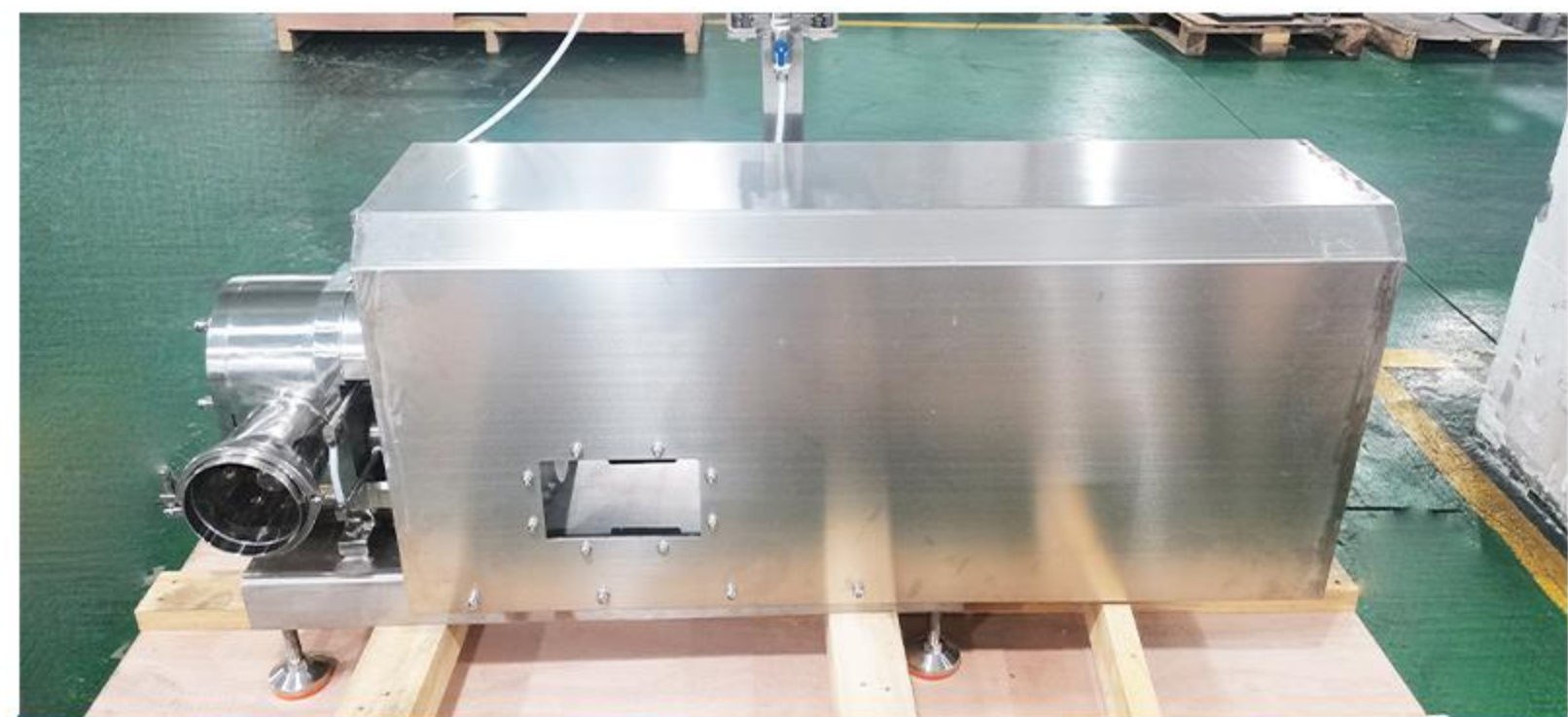
Paints, pigments, dyes, coatings, lubricating oils, synthetic fats, lubricating greases, diesel, petroleum catalysts, emulsified asphalt, modified asphalt, paraffin, adhesives, resins, etc.



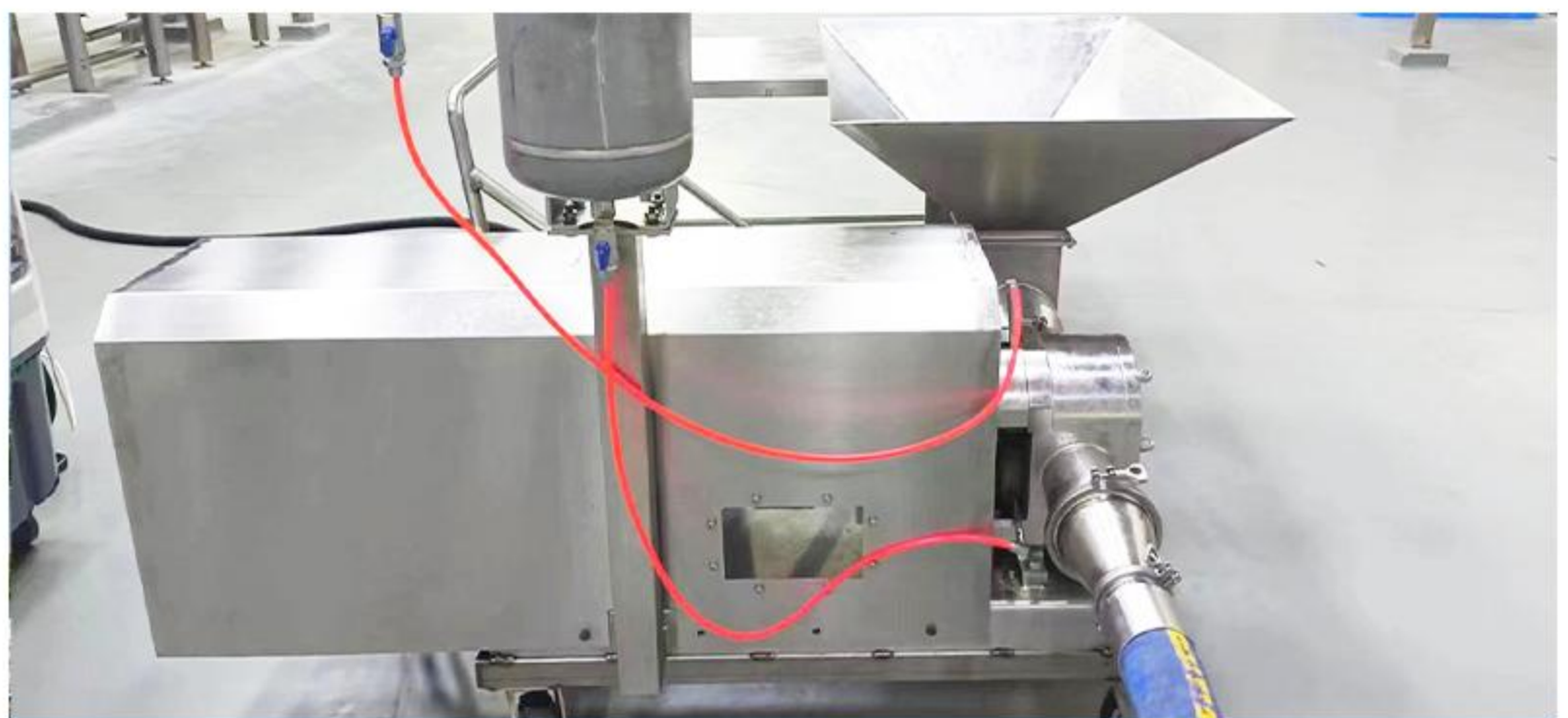
泰益欣生物科技（介质——油膏）
Medium —— Ointment



甘李药业（介质——胰岛素）
Medium —— Insulin



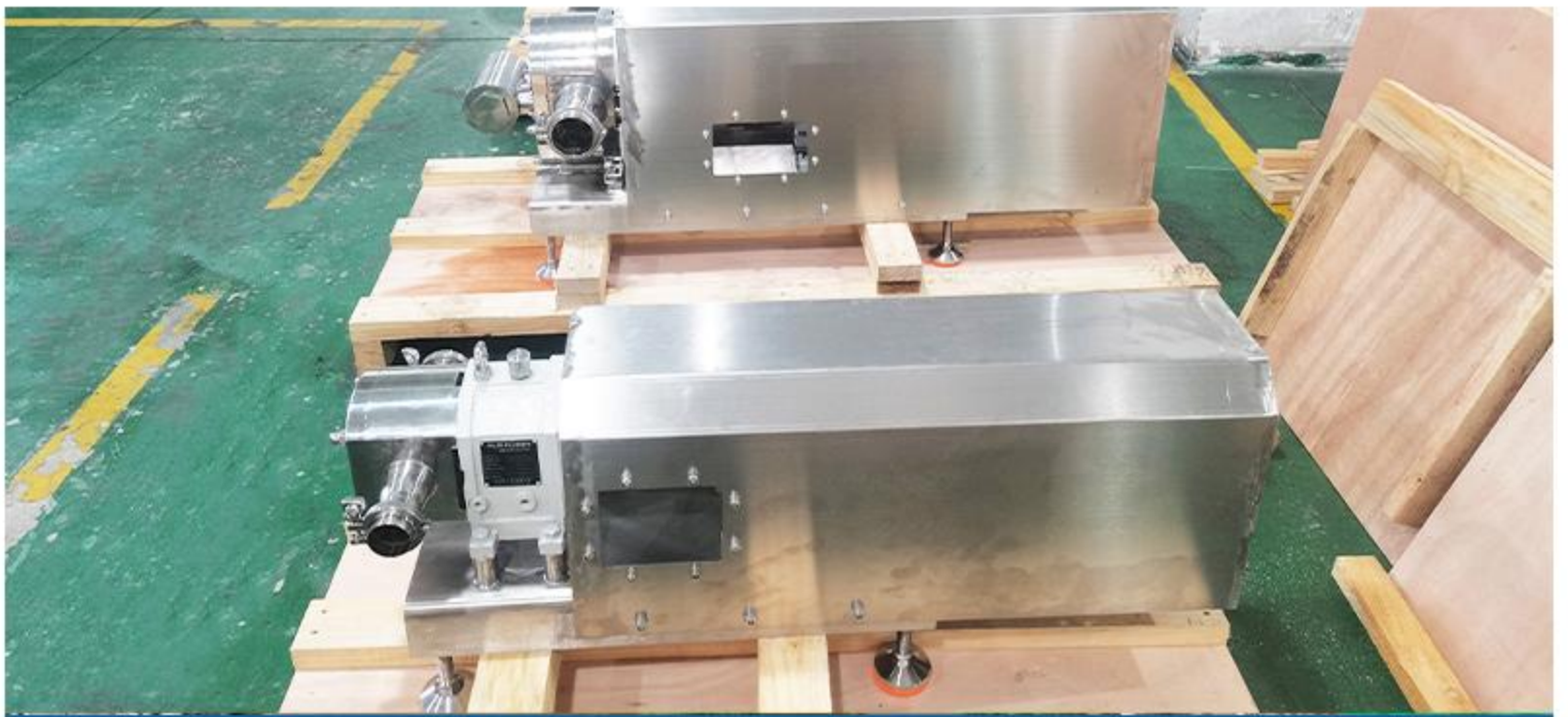
泰盛生物科技（介质——乙醇、沉淀物）
Medium —— Ethanol, Sediments



仟味食品（介质——肉类）
Medium —— Meat



纳爱斯（介质——油脂）
Medium —— Oils and Fats



金力鼎制药设备（介质——细胞悬浮液）
Medium —— Cell Suspension

应用案例

APPLICATION

CASES