



高性能旋转轴封画册

ROTARY SHAFT SEALS

致力于全球粉体密封方案专业提供商



BROW

江苏博立飞自动化科技有限公司

JIANGSU BELIEVE AUTOMATION TECHNOLOGY CO., LTD.



企业使命

以不断创新，驱动粉体工业变革



企业愿景

让粉体输送更智能 · 可靠 · 高效



核心价值观

精研 · 笃行 · 利他



品牌 Slogan

博立飞，让粉体设备运转更高效！

Corporate Mission: Drive the innovation and transformation of the powder industry through continuous innovation

Corporate Vision: Make powder conveying smarter, more reliable and more efficient

Core Values: In-depth R&D, Pragmatic Practice, Altruism

Brand Slogan: Believe Technology, Make Powder Equipment Operate More Efficiently!

Company Introduction

公司概况

江苏博立飞（Believe）自动化科技有限公司，致力于成为全球粉体密封方案专业提供商，是一家集研发设计、生产制造、销售服务于一体的创新型科技企业，深耕粉体配套核心领域，专注为各行业客户提供专业、稳定、定制化的阀门与高性能旋转轴封整体解决方案。

公司下设阀门事业部、旋转轴封事业部两大核心板块，产品适配锂电新能源、化工、制药、食品、环保、冶金等全行业复杂工况，从阀门流体控制到粉体旋转密封防护，全链条保障设备稳定运行。

● 阀门事业部

专业生产各类通用阀门及自控调节阀门，涵盖蝶阀、球阀、刀闸阀、半球阀、比例调节阀、V型球阀、陶瓷阀、塑料阀等全系列产品，适配各类粉体、流体、浆料输送与自动化调节需求，工况适配广、耐用性强、运行稳定。

● 旋转轴封事业部

专注粉体设备旋转轴封研发定制与改造升级，核心五大优势：零泄漏、抗轴跳、专业定制改造、维修成本低、生产效率高。自2018年起，公司依托国外先进进口密封技术自主迭代研发，凭借成熟技术沉淀，彻底解决传统密封漏粉、跑料、易磨损、故障率高、维修频繁、停机耗时耗钱等行业痛点。产品专为搅拌、干燥、结晶、输送等粉体设备打造长效密封保障，不易损坏、拆装便捷、后期维护简单省心，大幅减少设备停机检修时间，有效提升整体生产产能，让粉体生产无尘、安全、省钱又高效。

博立飞始终以专业研发深耕产品，以务实服务赋能客户，以利他初心共谋发展，持续为全球粉体行业提供高品质配套产品与系统化解决方案，助力企业生产降本增效、设备长期稳定运行，携手共创粉体工业高质量发展新未来。

JIANGSU BELIEVE AUTOMATION TECHNOLOGY CO., LTD.

Committed to becoming a global professional provider of powder sealing solutions, Jiangsu Believe Automation Technology Co., Ltd. is an innovative technology enterprise integrating R&D and design, production and manufacturing, sales and services. Rooted in the core field of powder supporting facilities, we focus on providing customers across industries with professional, stable and customized integrated solutions for valves and high-performance rotary shaft seals.

The company has two core business divisions: the Valve Division and the Rotary Shaft Seal Division. Our products adapt to complex working conditions in lithium new energy, chemical, pharmaceutical, food, environmental protection, metallurgy and other industries. We fully guarantee the stable operation of equipment through full-chain coverage, ranging from valve fluid control to powder rotary sealing protection.

Valve Division

We specialize in the production of various general valves and automatic control regulating valves, including a full range of products such as butterfly valves, ball valves, knife gate valves, hemisphere valves, proportional control valves, V-port ball valves, ceramic valves and plastic valves. Our products meet the automatic conveying and regulating demands of powder, fluid and slurry media, featuring wide working condition adaptability, high durability and stable operation.

Rotary Shaft Seal Division

We focus on the R&D, customization, renovation and upgrading of rotary shaft seals for powder processing equipment, with five core advantages: zero leakage, resistance to shaft runout, customized professional modification, low maintenance cost and high production efficiency. Since 2018, relying on advanced imported sealing technologies, the company has carried out independent iterative R&D. With profound technological accumulation, we thoroughly solve common industry pain points of traditional seals, including powder leakage, material escape, easy wear, high failure rate, frequent maintenance and costly downtime.

Tailored for powder processing equipment such as mixers, dryers, crystallizers and conveyors, our seals deliver long-term reliable sealing performance with sturdy structure, easy installation and disassembly, and simple daily maintenance. They greatly reduce equipment downtime and maintenance duration, effectively boost overall production capacity, and enable dust-free, safe, cost-effective and high-efficiency powder production.

Always adhering to refined R&D for product optimization, practical services for customer empowerment, and an altruistic original aspiration for win-win cooperation, Believe Technology continuously supplies high-quality supporting products and systematic solutions for the global powder industry. We help enterprises cut costs, improve efficiency, and ensure long-term stable equipment operation, working together to create a new future of high-quality development in the powder industry.

Cooperative Partners

合作伙伴

GEIM
格林美

umicore

云威新材
EWINWAY
NEW MATERIAL

昱泓科技
YUHONGKEJI

HWALVIN

朗净新能源

Pu ead

tyeeLi
奉新时代

天力锂能
TIANLILINENG

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MAM 新亞強
NEW ASIA MAN

JSJ

SUNNY

元 YL 力

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博立飞的高性能旋转轴封产品，凭借精湛的工艺与定制化的密封方案，已广泛应用于新能源材料、医药化工、食品添加剂、冶炼冶金等多个行业的混合搅拌、干燥、结晶、输送等设备中，具体涵盖：卧式螺带混合机、卧式犁刀混合机、卧式桨叶混合机、桨叶圆盘干化机、螺旋输送机、捏合机、星形卸料器等多种设备类型。

凭借在密封领域的深耕细作与卓越表现，博立飞赢得了客户的广泛认可与一致赞誉。公司的产品不仅在国内市场占据稳固份额，并稳步开拓国际市场，为众多客户提供优质的漏粉、漏浆液、轴跳、耐高温等各类密封难题解决方案。众多客户选择与博立飞长期合作，正是源于客户对博立飞公司技术实力、产品质量与服务水平的高度信任与鼎力支持。



BELIEVE high-performance rotary shaft seals, with exquisite craftsmanship and customized sealing solutions, are widely applied in mixing, stirring, drying, crystallization, conveying and other equipment across multiple industries, including new energy materials, pharmaceutical and chemical, food additives, smelting and metallurgy. Applicable equipment covers: horizontal ribbon mixers, horizontal plow mixers, horizontal paddle mixers, paddle disc dryers, screw conveyors, kneaders, star unloaders and other types of processing equipment. With in-depth dedication and outstanding performance in the sealing industry, Bolifei has won wide recognition and high praise from customers. Our products maintain a stable market share in domestic markets and steadily expand into global markets. We provide targeted solutions for various sealing problems such as powder leakage, slurry leakage, shaft runout and high-temperature resistance. Long-term cooperation with numerous clients stems from their full recognition and strong trust in Bolifei's technical strength, reliable product quality and professional after-sales service.

Corporate Culture

企业文化

企业使命

以不断创新，驱动粉体工业变革

企业愿景

让粉体输送更智能 · 可靠 · 高效

核心价值观

精研 · 笃行 · 利他



博立飞、以高端耐用旋转轴封，守护设备持续安全运转。以匠艺之专，造可靠之品；以创新之念，破行业之困；以务实之举，赋能工业升级。

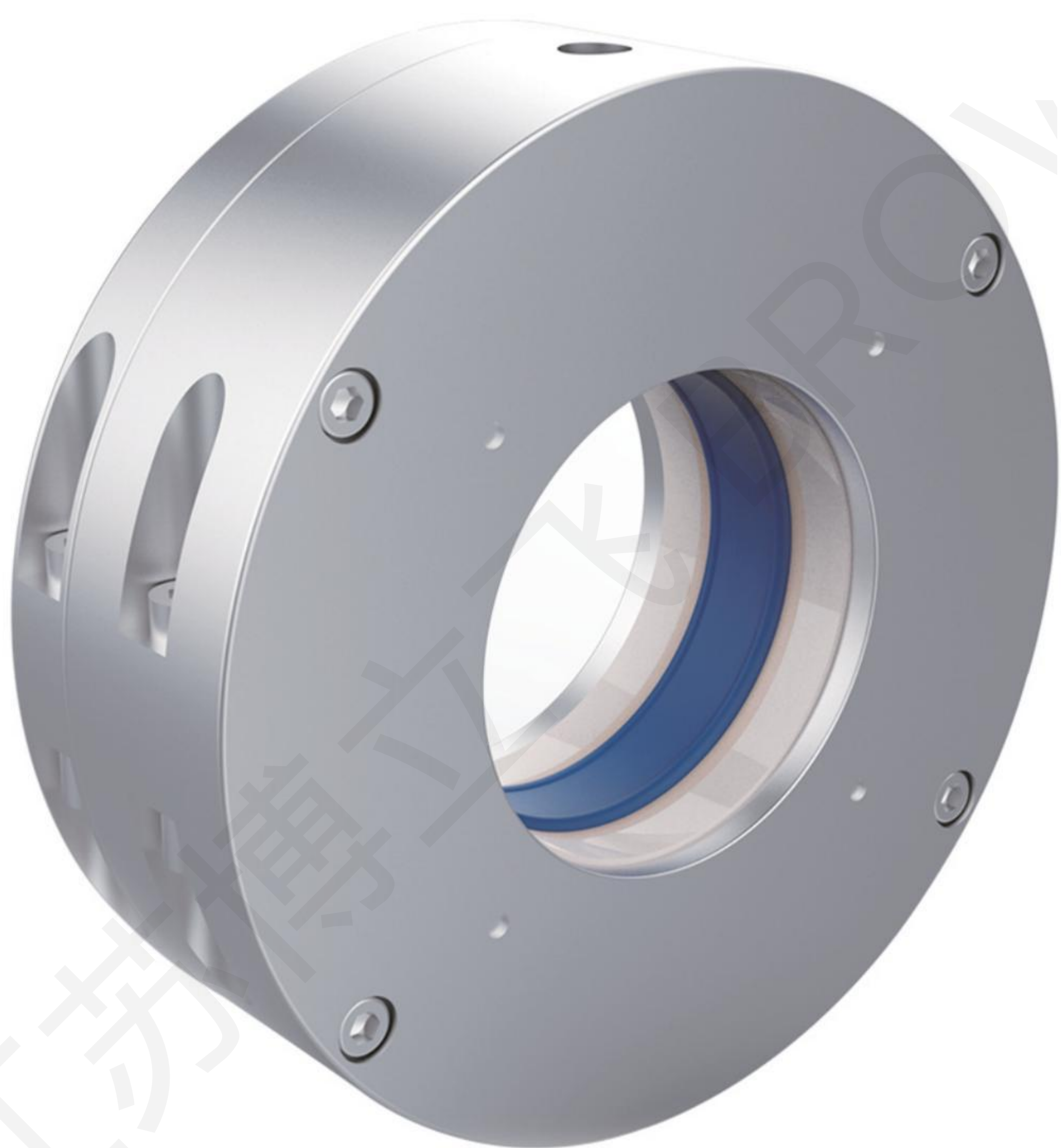
BELIEVE safeguards the continuous and safe operation of equipment with high-end and durable rotary shaft seals. Built by exquisite craftsmanship for reliable quality; Driven by innovation to break industry bottlenecks; Empowering industrial upgrading with pragmatic actions.

Qualifications & Honors

资质荣誉



博立飞旋转轴封系列



博立飞高性能旋转轴封是用全球顶尖材料和工艺精心打造的新一代高效专利密封产品。

高性能旋转轴封性能先进，适用于各种粉体和浆液设备的密封。广泛应用于锂电、制药、食品、化工、冶金行业的混合搅拌、干燥、结晶、输送等设备。高性能旋转轴封具有很高的性价比，是传统密封的升级替代产品。

轴封安装维护无需拆除减速机 and 轴承座;适用于需要经常拆开清洗的食品、制药设备。浮动式动环与主轴同步转动，可以有效解决填料密封易于泄漏甚至损伤轴径的问题;可以有效解决唇口密封和机械密封维修更换困难的问题。

高性能旋转轴封包括BL-D、BL-DJ、BL-DL、BL-DS四个系列。轴向密封为静密封，径向密封为动环和静环形成的端面密封。

BL-D、BL-D/J系列旋转轴封主要用于对金属异物极其敏感电池行业。动环和静环都由高功能工程塑料制成。轴封静环、动环由符合美国FDA 21 CFR 177.1550的高性能改性四氟材料和符合FDA21 CFR 177.2415的QK 1000 PEEK,离子硬化不锈钢等高功能材料制成;O型圈和轴套材质采用食品级硅胶、氟胶;卡箍、轴封座和轴封端盖材质采用304或316不锈钢。

BELIEVE high-performance rotary shaft seal is a new generation of high-efficiency patented sealing product elaborately manufactured with world-class premium materials and craftsmanship.

With advanced performance, our high-performance rotary shaft seal is suitable for sealing of various powder and slurry equipment. It is widely applied to equipment for mixing, stirring, drying, crystallization and conveying in lithium battery, pharmaceutical, food, chemical and metallurgical industries. Featuring excellent cost performance, it is an ideal upgraded replacement for traditional seals.

Installation and maintenance of the shaft seal do not require dismantling the reducer or bearing housing, making it perfectly suitable for food and pharmaceutical equipment that needs frequent disassembly and cleaning. The floating rotating ring rotates synchronously with the main shaft, which effectively solves the problems of easy leakage and shaft diameter damage caused by packing seals, as well as the difficult maintenance and replacement of lip seals and mechanical seals.

The high-performance rotary shaft seal includes four series: BL-D, BL-DJ, BL-DL and BL-DS. The axial seal adopts a static sealing structure, while the radial seal is an end face seal formed by rotating rings and stationary rings.

BL-D and BL-D/J series rotary shaft seals are mainly used in the battery industry, which has extremely strict requirements on metal foreign matter control. Both rotating and stationary rings are made of high-performance engineering plastics.

The stationary and rotating rings are made of high-performance modified PTFE compliant with FDA 21 CFR 177.1550, QK 1000 PEEK complying with FDA 21 CFR 177.2415, and ion-hardened stainless steel.

O-rings and shaft sleeves are made of food-grade silicone and fluororubber. Clamps, seal housings and end covers are made of 304 or 316 stainless steel.

01 高性能旋转轴封BL-D系列



BL-D 系列轴封动环



BL-D 系列轴封分解图

产品性能 EQUIPMENT PERFORMANCE

硬度 (Hardness)	温度 (Temperature)
1500HV	-60~200℃
转速 (Rotational speed)	压力 (Pressure)
≤200rpm	< 0.2MPa
推荐用途 (Abrasion resistance)	
食品无菌生产线、制药行业、化工行业、新能源行业 Sterile food production lines, pharmaceutical industry, chemical industry, new energy industry	

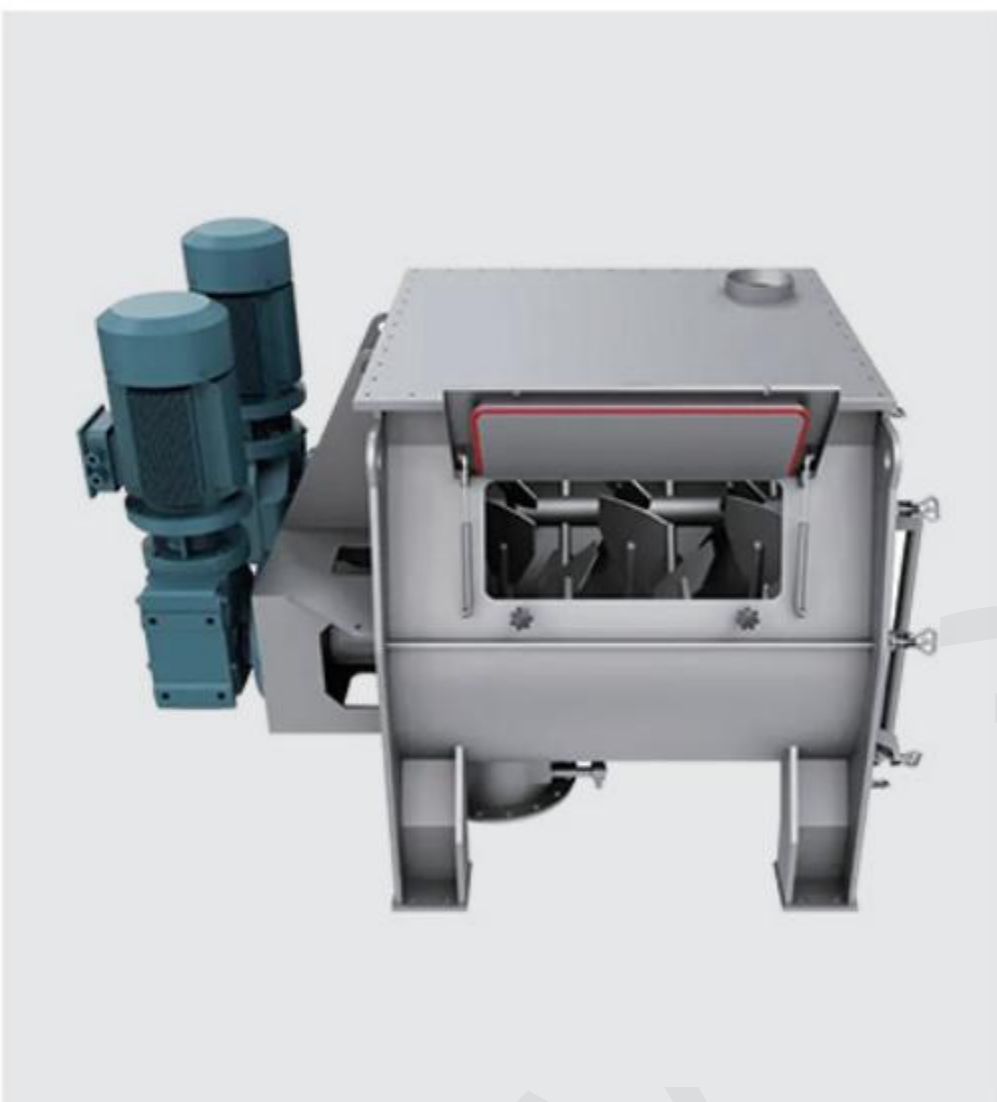
适用设备 APPLICABLE EQUIPMENT



犁刀混合机
Plow Blade Mixer



卧式螺带混合机
Horizontal Screw-Blade Mixer



桨叶混合机
Paddle Mixer



捏合机
Kneader



螺旋输送机
Screw conveyor

高性能旋转轴封·零泄漏、抗轴跳、低成本、安装改造

➤ 02 高性能旋转轴封BL-DJ系列



BL-DJ系列轴封静环



BL-DJ系列轴封分解图

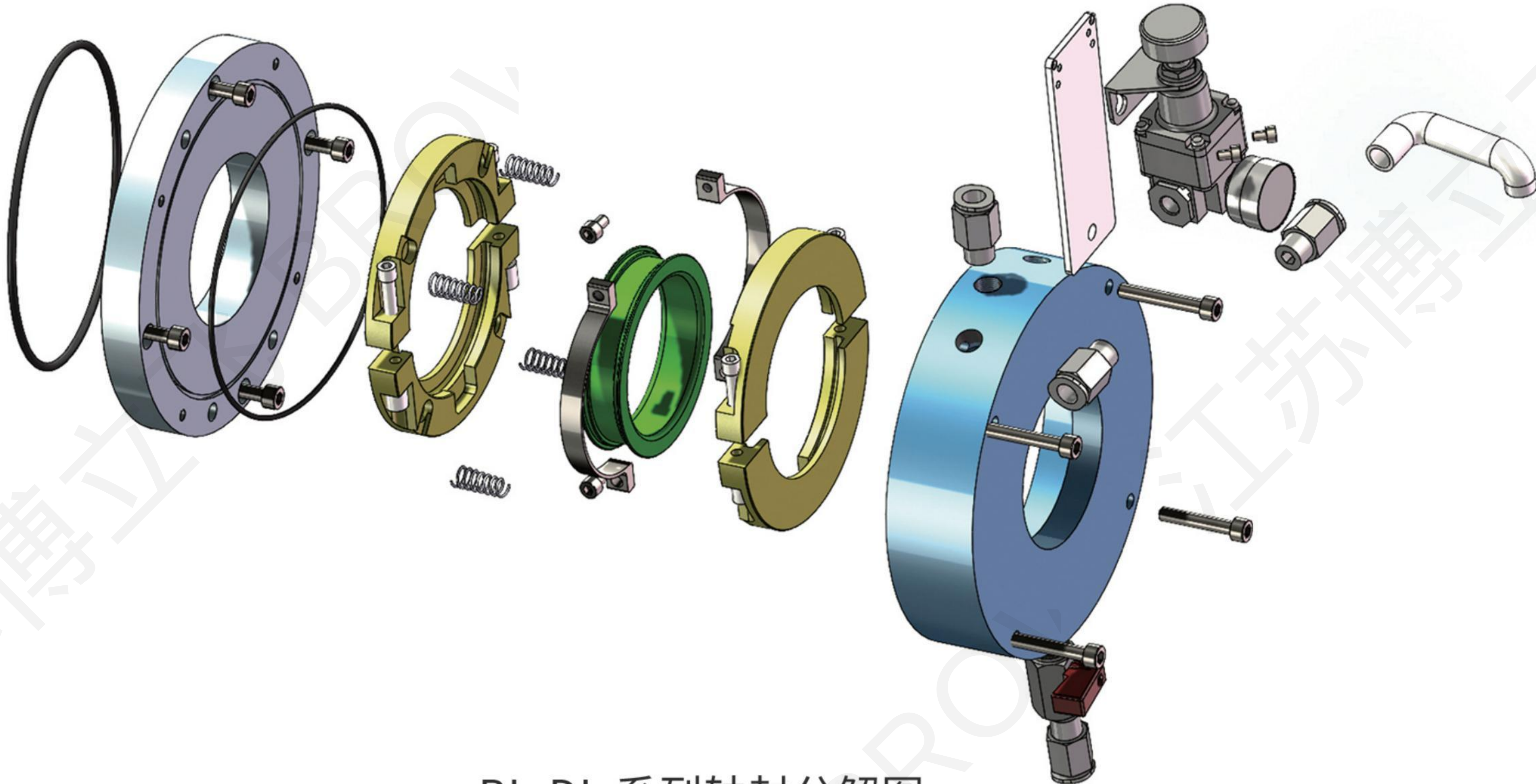
BL-DJ系列旋转轴封轴封是304分体式外壳，分体式动环，进口硅胶，304分体式卡箍组成(静环按客户需求)，用于新能源材料、医药化工、冶金等行业中输送粉料、浆料的螺旋输送机、混合机、捏合机、关风机等设备。相比传统编织填料密封，BL-DJ能提供更高效更环保的密封效果，使用高性能旋转轴封彻底告别粉尘泄漏。

BL-DJ series rotary shaft seals consist of a 304 split housing, a split rotating ring, imported silicone rubber, and a 304 split clamp (the stationary ring is customized according to customer requirements). They are designed for equipment such as screw conveyors, mixers, kneaders, and airlock valves used in the transportation of powders and slurries in industries including new energy materials, pharmaceuticals and chemicals, and metallurgy. Compared to traditional braided packing seals, BL-DJ can provide a more efficient and environmentally friendly sealing performance, completely eliminating dust leakage through the use of high-performance rotary shaft seals.

优势解析	分体式旋转轴封（如 BL-DJ）	传统填料密封
安装与维护	旋转轴封可制作成分体形式，安装简单，维护方便。后续更换易损件不需要拆减速和轴承，减少停机时间，提高生产效率。	拆卸复杂：更换填料必须沿轴向拉出或拆解相关部件，过程繁琐，耗时费力，导致长时间停机。
对工况的适应性	自适应与容错性强：分体式结构配合浮动设计或弹性元件，能够较好地适应轴的跳动、偏心及热膨胀，保持稳定的密封效果。	磨损与泄漏风险高：对轴的运动和偏差敏感，易因摩擦不均而磨损，导致泄漏通道快速形成，尤其在含颗粒的粉料、浆料中更为严重。
密封性能与环保	密封性能优异，由于有三道密封，所以对于粉料，液体料，浆料都有非常好的密封性。能保证在使用过程中零泄露，从而降低计划以外停机风险，提高产能。	密封性能相对较差，泄漏量较大，一般允许有少量的泄漏（滴漏），以起到冷却和润滑填料的作用。对于要求严格密封的场合不太适用。
长期运行成本	全生命周期成本低：虽然初期采购成本可能较高，但因其寿命长、免维护或维护极简，显著降低了因停机造成的生产损失和人工成本。	综合成本高昂：备件成本低，但频繁的更换导致人工成本和停机损失巨大，总拥有成本往往更高。

Advantage Analysis	Split-type Rotary Shaft Seal (e.g., BL-DJ)	Traditional Packing Seal
Installation & Maintenance	The rotary shaft seal can be made into a fully split structure, enabling easy installation and maintenance. For subsequent replacement of wearing parts, there is no need to disassemble the reducer or bearings, which reduces downtime and maintenance workload.	Complex disassembly: Replacing the packing requires pulling it out axially or disassembling related components. The process is cumbersome, time-consuming, and labor-intensive, resulting in prolonged downtime.
Adaptability to Operating Conditions	High adaptability and fault tolerance: The split structure, combined with a floating design or elastic elements, can well adapt to shaft runout, eccentricity, and thermal expansion, maintaining stable sealing performance.	High risk of wear and leakage: Sensitive to shaft movement and deviation, it is prone to wear due to uneven friction, leading to the rapid formation of leakage channels—especially severe in powders, slurries, and liquids containing particles.
Sealing Performance & Environmental Protection	Excellent sealing performance: Equipped with three sealing stages, it provides superior sealing for powders, liquids, and slurries. It ensures no material leakage during operation, avoiding environmental pollution and material waste, and meets environmental protection requirements.	Relatively poor sealing performance with large leakage: A small amount of leakage (dripping) is generally allowed to cool and lubricate the packing. For powders and toxic liquids, it cannot meet strict sealing requirements, easily causing environmental pollution.
Long-term Operating Costs	Low total life-cycle cost: Although the initial purchase cost may be higher, its long service life and minimal or no maintenance significantly reduce production losses and labor costs caused by downtime.	High comprehensive cost: While the cost of spare parts is low, frequent replacements result in significant labor costs and downtime losses, leading to a higher total cost of ownership.

03 高性能旋转轴封BL-DL系列



BL-DL 系列轴封分解图

产品性能 EQUIPMENT PERFORMANCE

硬度 (Hardness)	温度 (Temperature)
1500HV	-60~200℃
转速 (Rotational speed)	压力 (Pressure)
≤200rpm	< 0.2MPa
推荐用途 (Abrasion resistance)	
食品和奶酪加工、香料和调味料、制药和化学行业 Food and cheese processing, spices and seasonings, pharmaceutical and chemical industries	

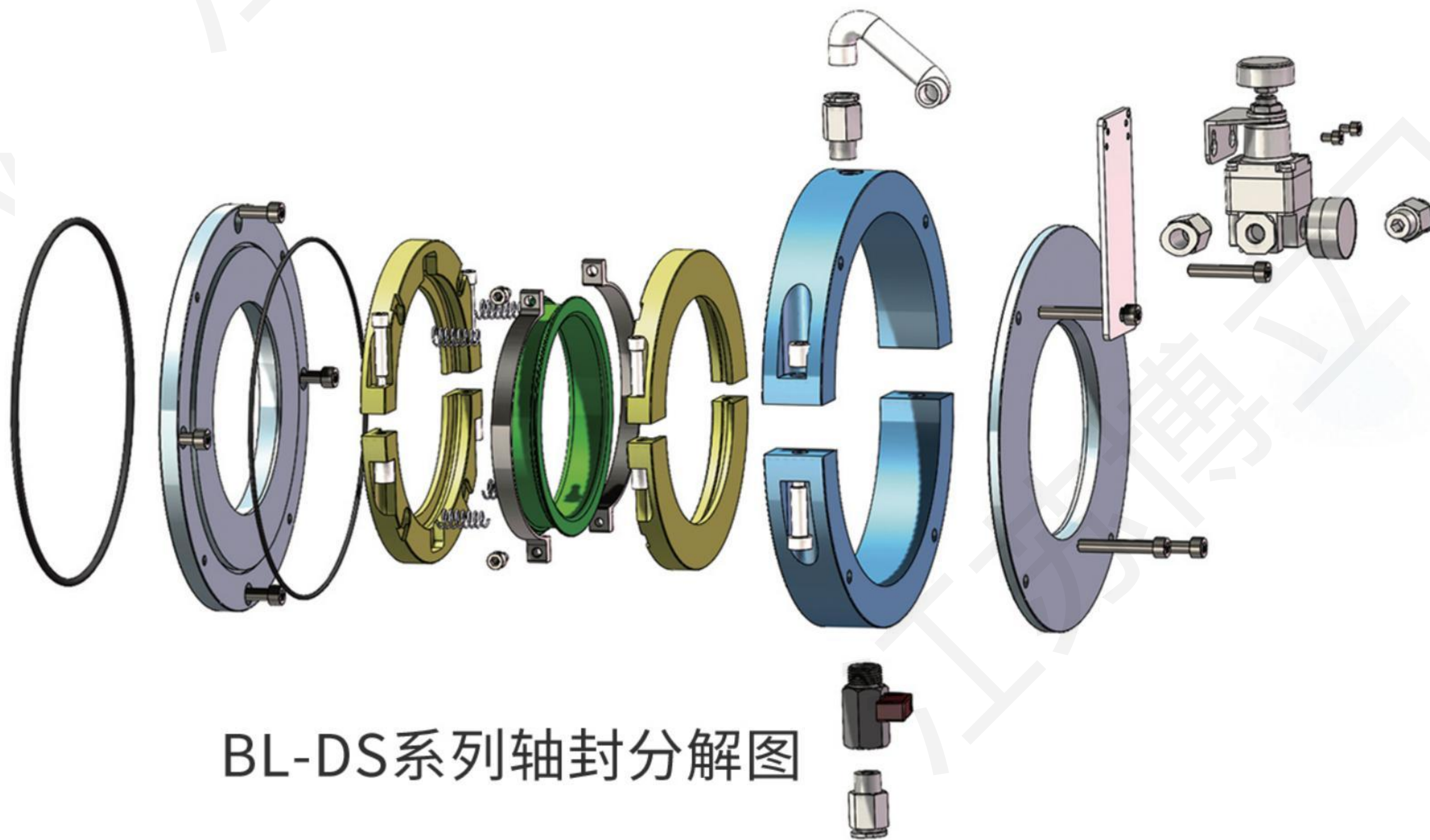
应用场景 APPLICABLEEQUIPMENT



高性能旋转轴封·零泄漏、抗轴跳、低成本、安装改造

➤ 04 高性能旋转轴封BL-DS系列

BL-DS系列旋转轴封轴封是304一体式外壳，分体式动环，分体式中壳，进口硅胶，304分体式卡箍组成，用于新能源材料、医药化工、冶金等行业中输送粉料、浆料的螺旋输送机、混合机、捏合机、关风机等设备。相比传统编织填料密封，BL-DS能提供更便捷的安装条件，适合空间较小的安装环境，使用高性能旋转轴封彻底告别粉尘泄漏。



BL-DS系列轴封分解图

BL-DS series rotary shaft seal consists of an integrated 304 stainless steel housing, split rotating ring, split intermediate housing, imported silicone rubber, and 304 split clamp.

It is widely used in screw conveyors, mixers, kneaders, rotary valves and other equipment for powder and slurry conveying in new energy materials, pharmaceutical chemical, metallurgy and other industries.

Compared with traditional braided packing seals, the BL-DS series features easier installation and adapts to confined mounting spaces. The adoption of this high-performance rotary shaft seal thoroughly eliminates dust leakage.

设备优势 EQUIPMENT ADVANTAGES

- 防止因产品泄漏导致的轴承和驱动装置失效;
- 剖分式中壳设计，适合轴向距离更小的安装环境;
- 内部组件随轴旋转，避免对轴的磨损;
- 消除由于编织填料磨损造成的产品污染;
- 可有效密封灰尘和有害蒸汽等;
- 相比传统填料密封消耗更少能耗;
- 不会磨损和划伤轴;
- 可按需定制尺寸。
- Prevent failure of bearings and driving devices caused by product leakage.
- Split intermediate housing design, suitable for installation environments with smaller axial space.
- Internal components rotate synchronously with the shaft to avoid shaft wear.
- Eliminate product pollution caused by wear of braided packing. Effectively seal dust, harmful vapor and other media.
- Lower energy consumption compared with traditional packing seals.
- No shaft wear or shaft scoring.
- Custom dimensions available on request.

设备应用企业 EQUIPMENT APPLICATION ENTERPRISES



食品
Food



制药
Pharmaceutical

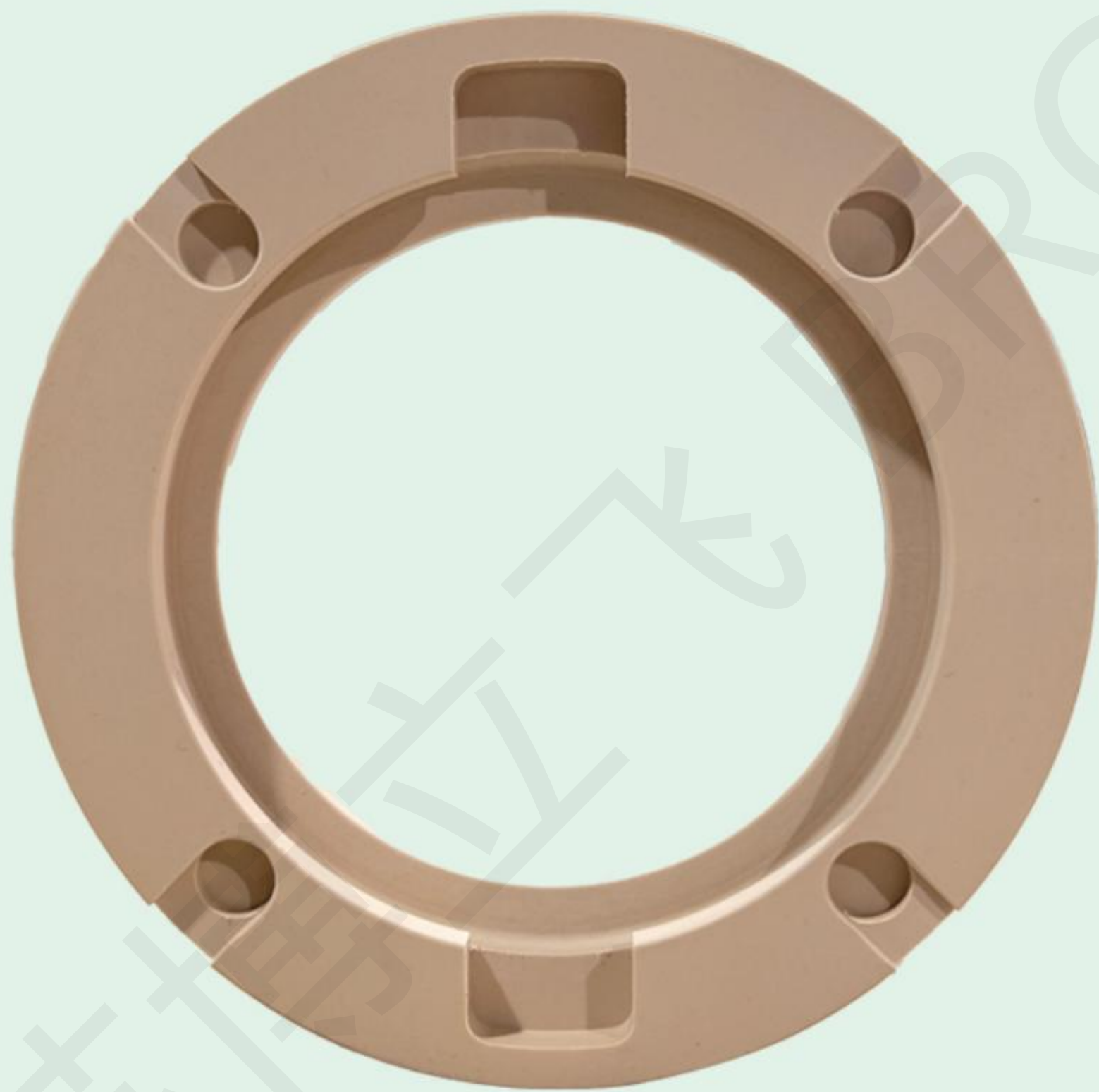


化工
Chemical



新能源
New Energy

05 高性能旋转轴封配件



PEEK材质(50%)

peek聚醚醚酮是一种具有耐高温、自润滑、易加工和高机械强度等优异性能的特种工程塑料，可制造加工成各种机械零部件；飞机发动机零部件、自动洗衣机转轮、医疗器械零部件等。

优点：

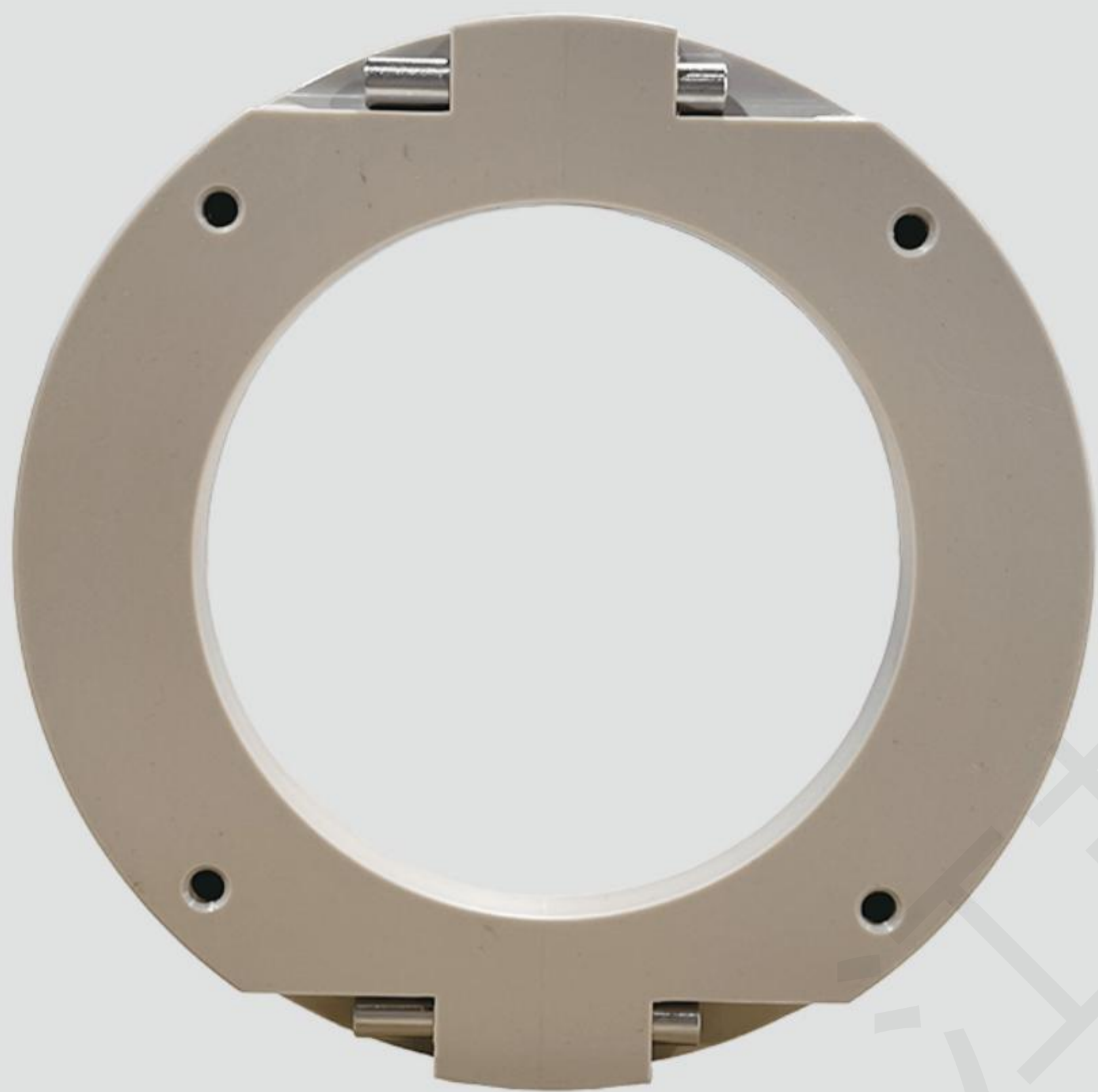
耐高温、耐低温、耐腐蚀、耐气候
高润滑、不粘附、无毒害、电绝缘性

PEEK (Polyether Ether Ketone) is a special engineering plastic with excellent properties such as high temperature resistance, self-lubrication, easy machinability and high mechanical strength. It can be processed into various mechanical parts, including aero-engine components, washing machine impellers, and medical device parts.

Advantages

High temperature resistance, low temperature resistance, corrosion resistance, weather resistance

Self-lubricating, non-stick, non-toxic, superior electrical insulation



PEEK材质

peek聚醚醚酮是一种具有耐高温、自润滑、易加工和高机械强度等优异性能的特种工程塑料，可制造加工成各种机械零部件；飞机发动机零部件、自动洗衣机转轮、医疗器械零部件等。

优点：

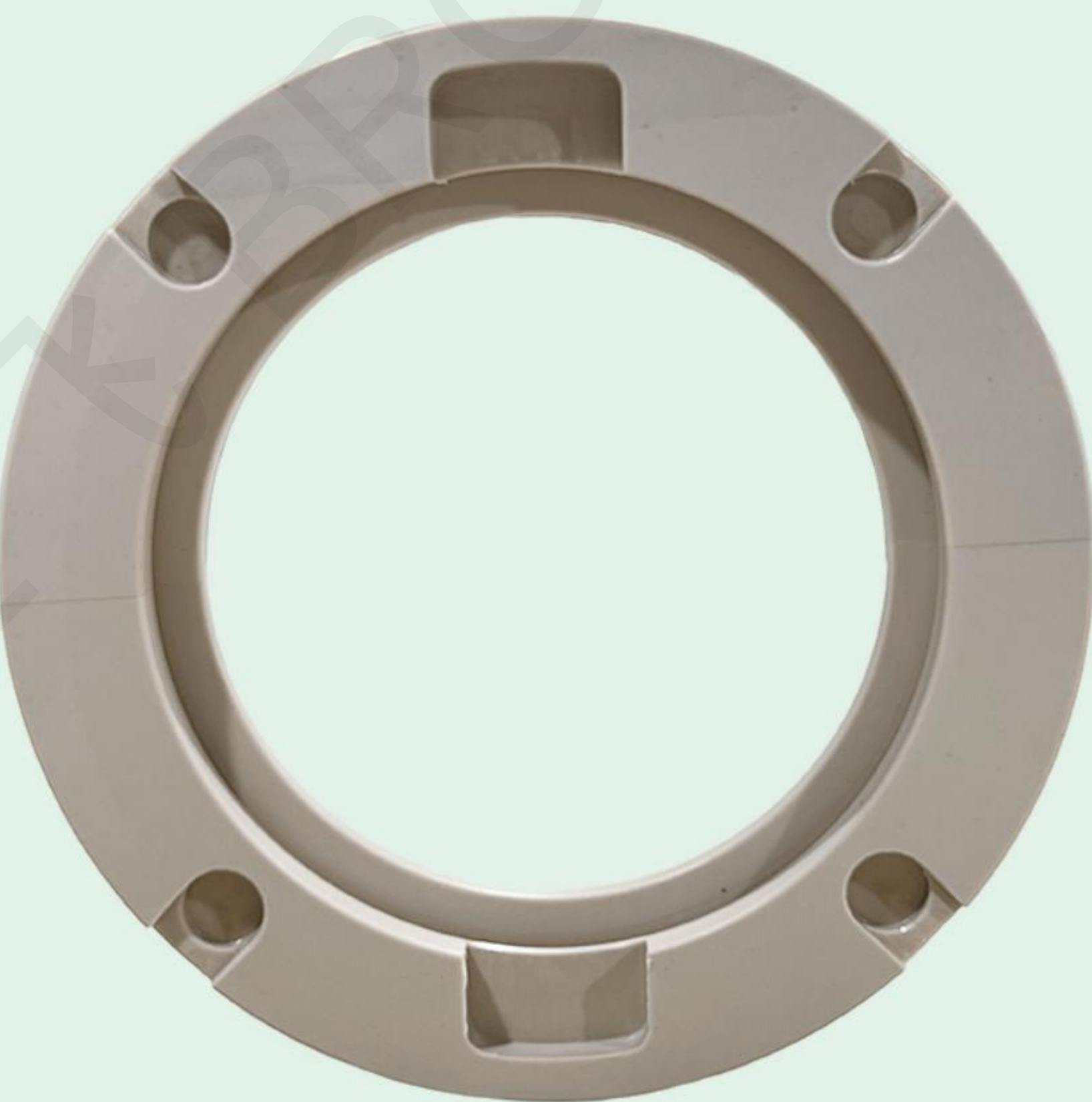
耐高温、耐低温、耐腐蚀、耐气候
高润滑、不粘附、无毒害、电绝缘性

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Advantages

High temperature resistance, low temperature resistance, corrosion resistance, weather resistance

Self-lubricating, non-stick, non-toxic, superior electrical insulation



PEEK材质

peek聚醚醚酮是一种具有耐高温、自润滑、易加工和高机械强度等优异性能的特种工程塑料，可制造加工成各种机械零部件；飞机发动机零部件、自动洗衣机转轮、医疗器械零部件等。

优点：

耐高温、耐低温、耐腐蚀、耐气候
高润滑、不粘附、无毒害、电绝缘性

PEEK (Polyether Ether Ketone) is a special engineering plastic with excellent properties such as high temperature resistance, self-lubrication, easy machinability and high mechanical strength. It can be processed into various mechanical parts, including aero-engine components, washing machine impellers, and medical device parts.

Advantages

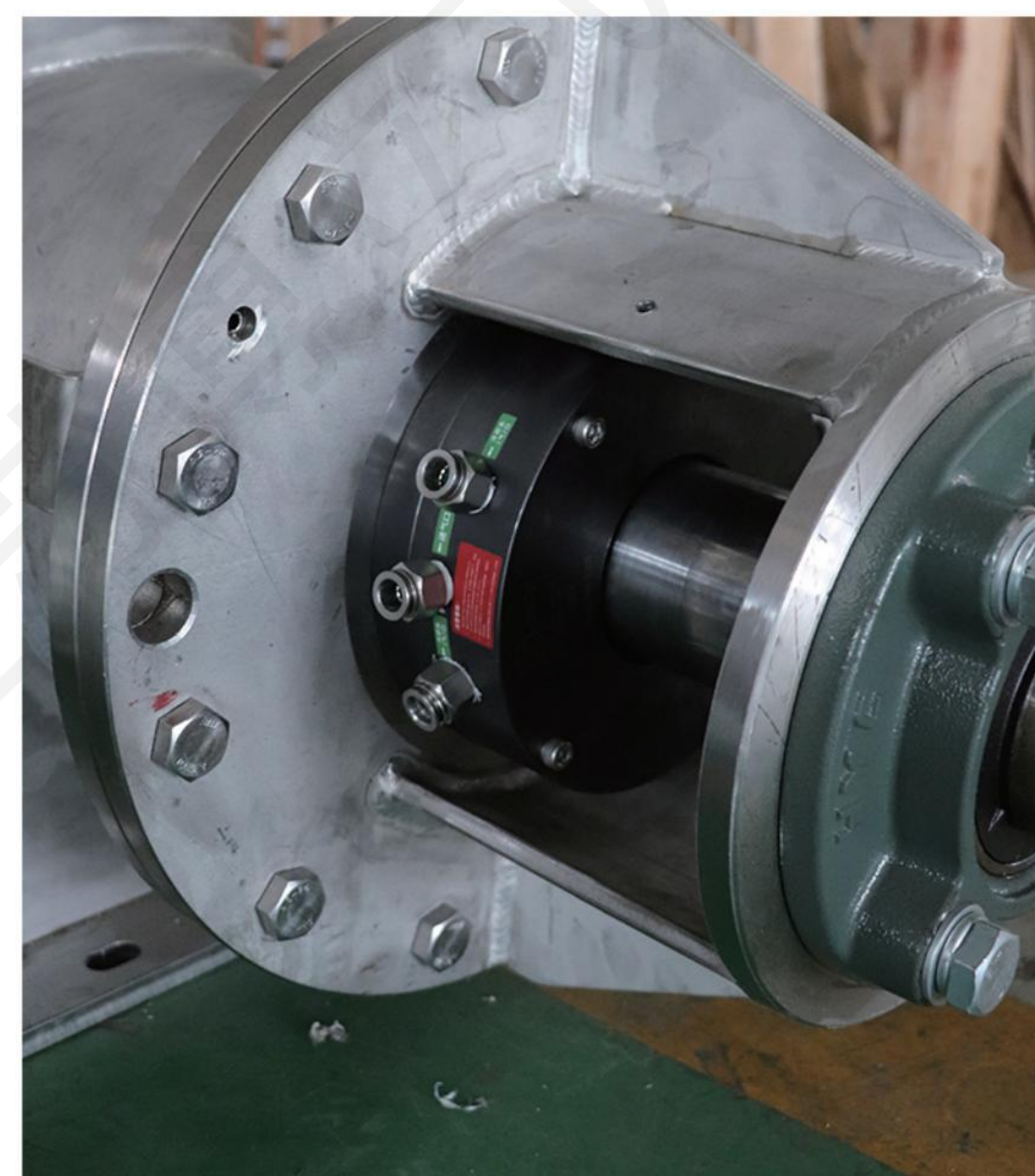
High temperature resistance, low temperature resistance, corrosion resistance, weather resistance

Self-lubricating, non-stick, non-toxic, superior electrical insulation

高性能旋转轴封·零泄漏、抗轴跳、低成本、安装改造

现场安装实例

On-site Installation Examples



01 锂电池行业用螺带混合机



背景介绍 Background Information

客户的正极材料生产过程中使用了大量的混合设备，生产过程中锂电正极材料颗粒对洁净度要求高且有一定磨损性和腐蚀性，传统的填料密封容易泄漏且需要多次上紧。

The customer's cathode material production process involves the use of a large number of mixing devices. During production, lithium-ion cathode material particles impose high cleanliness requirements and exhibit a certain degree of abrasiveness and corrosiveness. Traditional packing seals are prone to leakage and require frequent retightening.

面临挑战 Facing challenges

工作轴在长时间使用后存在磨损，此前所用的盘根密封持续泄漏，磨损后的密封材料容易脱落混入正极材料，正极材料质量出现不可控风险，继而影响电池导电效率，容易导致电池成品的性能下降。编织盘根大概使用寿命为三个月，使用期间需要频繁上紧，维护成本高。

The drive shaft exhibits wear after prolonged use. The packing seal previously used has been leaking continuously, and the worn sealing material is prone to breaking off and mixing with the cathode material. This creates uncontrollable risks regarding the quality of the cathode material, which in turn affects the battery's electrical conductivity and can lead to a decline in the performance of the finished battery. Braided packing has an approximate service life of three months and requires frequent tightening during use, resulting in high maintenance costs.

操作工况 Operating conditions

设备规格:4X1.6米(长X宽),容积10立方米,每批次约3小时
介质:锂电正极材料
转速:25~27rpm
温度:40~60°C
压力:常压
轴颈尺寸:Ø 160mm
产品方案:博立飞旋转轴封, 不锈钢外壳不锈钢底板+内部硅橡胶+PTFE转子片(剖分)

Equipment Specifications: 4x1.6m (LxW), Volume 10m³, Approx.3 hours per batch
Medium: Lithium battery cathode-material
Rotational Speed: 25-27 rpm
Temperature: 40-60°C
Pressure: Atmospheric pressure
Shaft Neck Size: Ø 160 mm
Product Solution: BELIEVE Rotary Shaft Seal, Stainless Steel Housing with Stainless Steel Base Plate + Internal Silicone Rubber + PTFE Rotor Plate (Split Type)

解决方案 Solution

博立飞旋转轴封是卧式螺带混合机的最佳密封方案。锂电池正极材料和负极材料均含大量颗粒，混合机工作时有一定的轴向跳动(±3mm)，博立飞旋转轴封剖分安装让安装简单便捷，硅橡胶与轴过盈配合一起旋转，轴不会被磨损，也无需频繁的维护或替换，符合新能源材料行业对铜铁锌等异物管控要求及美国FDA法规及国际GMP规范，确保安全、无菌与可追溯。BGR密封件使用寿命一般12个月，使用过程中无需上紧。

BELIEVE rotary shaft seal is the optimal seal-ing solution for horizontal screw ribbon-mixers. Both lithium-ion battery cathode and anode materials contain a large number of particles, and the mixer experiences a certain degree of axial runout (+3 mm) during operation. The split design of the BELIEVE rotary shaft seal makes installation simple and convenient. The silicone rubber rotates in an interference fit with the shaft, preventing shaft wear and eliminating the need for frequent maintenance or replacement. It complies with the new energy materials industry's requirements for controlling foreign matter such as copper, iron, and zinc, as well as U.S. FDA regulations and international GMP standards, ensuring safety, sterility, and traceability. The BGR seal typically has a service life of 12 months and does not require retightening during use.

高性能旋转轴封·零泄漏、抗轴跳、低成本、安装改造

02 巧克力行业用螺带混合机



背景介绍 Background Information

客户的巧克力工厂使用了大量的混合设备，生产过程中由于原材料是巧克力颗粒或糖，其浆料磨损性强，传统的填料密封持续泄漏。

The client's chocolate factory utilizes extensive mixing equipment. During production, the highly abrasive nature of the slurry—composed of chocolate pellets or sugar—causes persistent leakage in traditional packing seals.

面临挑战 Facing challenges

工作轴长时间使用后磨损严重，填料密封需要频繁上紧且容易泄漏，盘根磨损后容易混入巧克力浆料，食品安全受到严重影响，并且外溢出的巧克力容易产生清洗死角，容易滋生细菌，巧克力有变质的风险。

After prolonged use, the drive shaft suffers significant wear, requiring frequent tightening of the packing seal which remains prone to leakage. Worn packing material can contaminate chocolate paste, posing serious food safety risks. Spilled chocolate creates hard-to-clean areas where bacteria can thrive, increasing the risk of chocolate spoilage.

操作工况 Operating conditions

设备规格:2X1.2米(长X宽)，容积3立方米，每批次约2小时
介质:巧克力浆料
转速:50~70rpm
温度:50°C
压力:常压
轴颈尺寸:Ø100mm
产品方案:博立飞旋转轴封，不锈钢外壳不锈钢底板+硅橡胶+整体式PTFE转子片

Equipment Specifications: 2x1.2m (Length x Width), Volume 3m³, Approx. 2 hours per batch
Medium: Chocolate paste
Rotational Speed: 50~70 rpm
Temperature: 50°C
Pressure: Atmospheric pressure
Shaft Neck Size: Ø100 mm
Product Solution: BELIEVE Rotary Shaft Seal, Stainless Steel Housing with Stainless Steel Base Plate + Silicone Rubber + Integral PTFE Rotor Plate

解决方案 Solution

博立飞旋转轴封采用食品级材料，符合GMP要求，是巧克力混合设备的最佳密封方案。
1.硅橡胶弹性体与轴过盈配合，硅胶带动PTFE转子转动，轴和硅胶无相对运动，轴不会出现磨损。
2.可充气密封设计，形成气屏障，保护混合机内物料不泄漏，外部的灰尘也无法进入，进而避免污染原料。
3.可剖分安装，避免拆除轴承座、减速机等设备，安装&检修便捷。

BELIEVE rotary shaft seals utilize food-grade materials compliant with GMP requirements, offering the optimal sealing solution for chocolate mixing equipment.
1. A silicone rubber elastomer forms an interference fit with the shaft. The silicone drives the PTFE rotor, eliminating relative motion between the shaft and silicone to prevent shaft wear.
2. Inflatable seal design creates an air barrier, preventing material leakage from the mixer while blocking external dust ingress to avoid ingredient contamination.
3. Split-mount design eliminates the need to remove bearing housings or gearboxes, enabling easy installation and maintenance.

➤ 03 其他行业设备应用

调料和香料 Seasonings and spices

某调味料厂卧式螺带混合机，原采用 PTFE 盘根密封，长期受齿轮箱泄漏问题困扰。设备不仅频繁检修、磨损轴体，还需多次更换主轴，同时始终存在物料被污染的隐患。

更换博立飞高性能旋转轴封后，彻底杜绝了物料污染问题，有效防止轴承过早损坏；大幅解决粉体泄漏损耗，减少轴体维修与更换频次，规避非计划停机，显著降低设备维保综合成本。

改造前



改造后



烘培业 Baking Industry

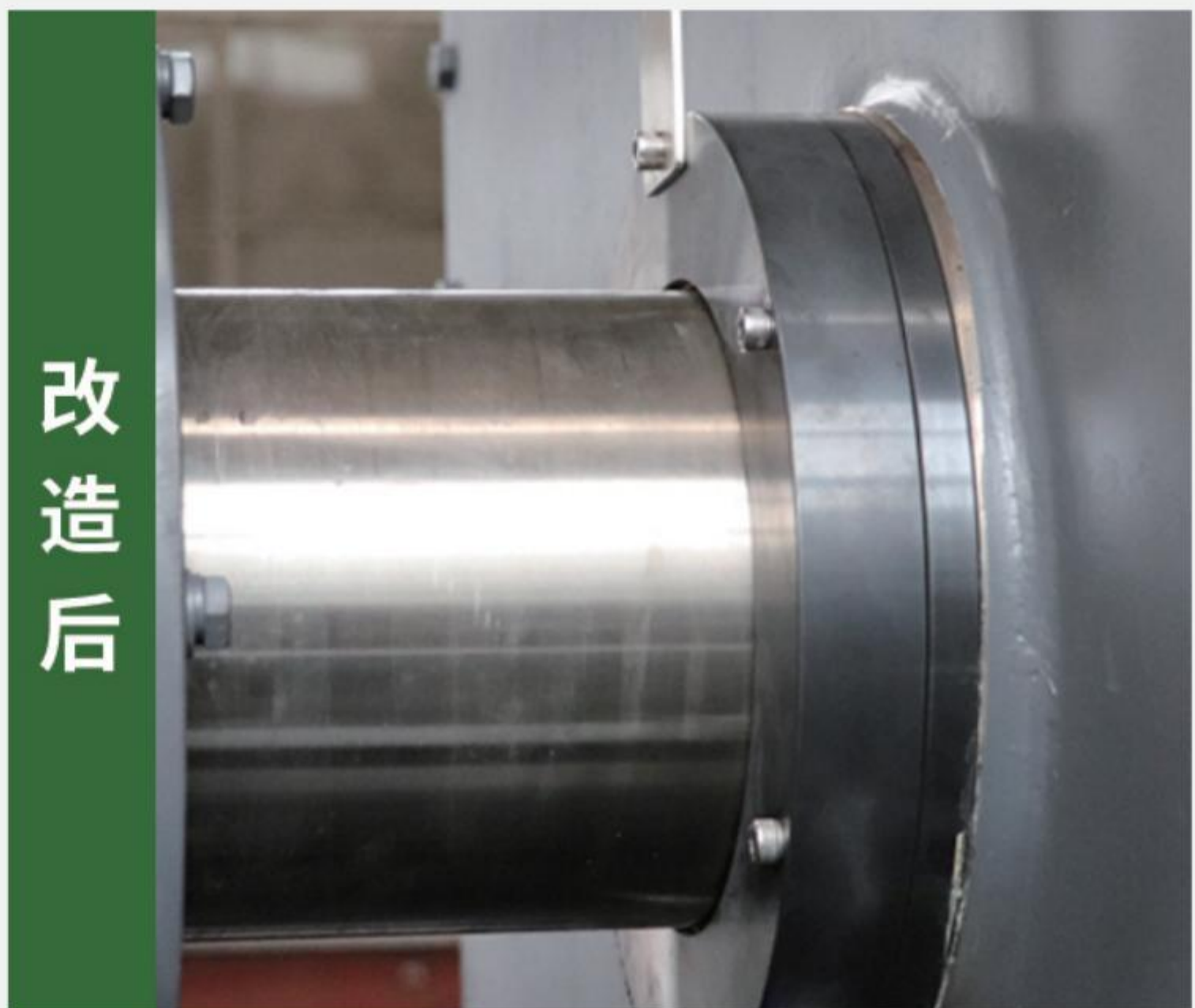
某饼干生产厂家的面机长期存在原料泄漏难题。

改用博立飞旋转轴封后，设备运行安全性与整体洁净度大幅提升，有效杜绝主轴磨损和原料损耗，规避非计划停机故障；同时设备日常卫生清洁更高效、更省时，完全满足食品生产洁净规范要求。

改造前



改造后



制糖业 Sugar Industry

某糖厂的螺旋输送机一直深受泄漏困扰，产品损失严重。安装上博立飞旋转轴封后，从此消除了轴承的提前失效，也避免了输送机的轴磨损和计划外停机事故，提升了运行环境的安全和整洁度，降低了运营期间的维护成本。

改造前



改造后



新材料行业 New Materials Industry

某新材料企业混合机长期存在密封泄漏难题，不仅造成物料大量损耗，现场生产环境与卫生整洁度也难以达标。

换装博立飞旋转轴封后，有效杜绝物料外泄浪费，彻底规避主轴磨损隐患，避免设备非计划停机，整机运行安全性与现场生产整洁度显著提升。

采用博立飞剖分式旋转轴封，无需拆解减速机与轴承座，拆装更换简单便捷，后期运维更省时、更省心。

改造前

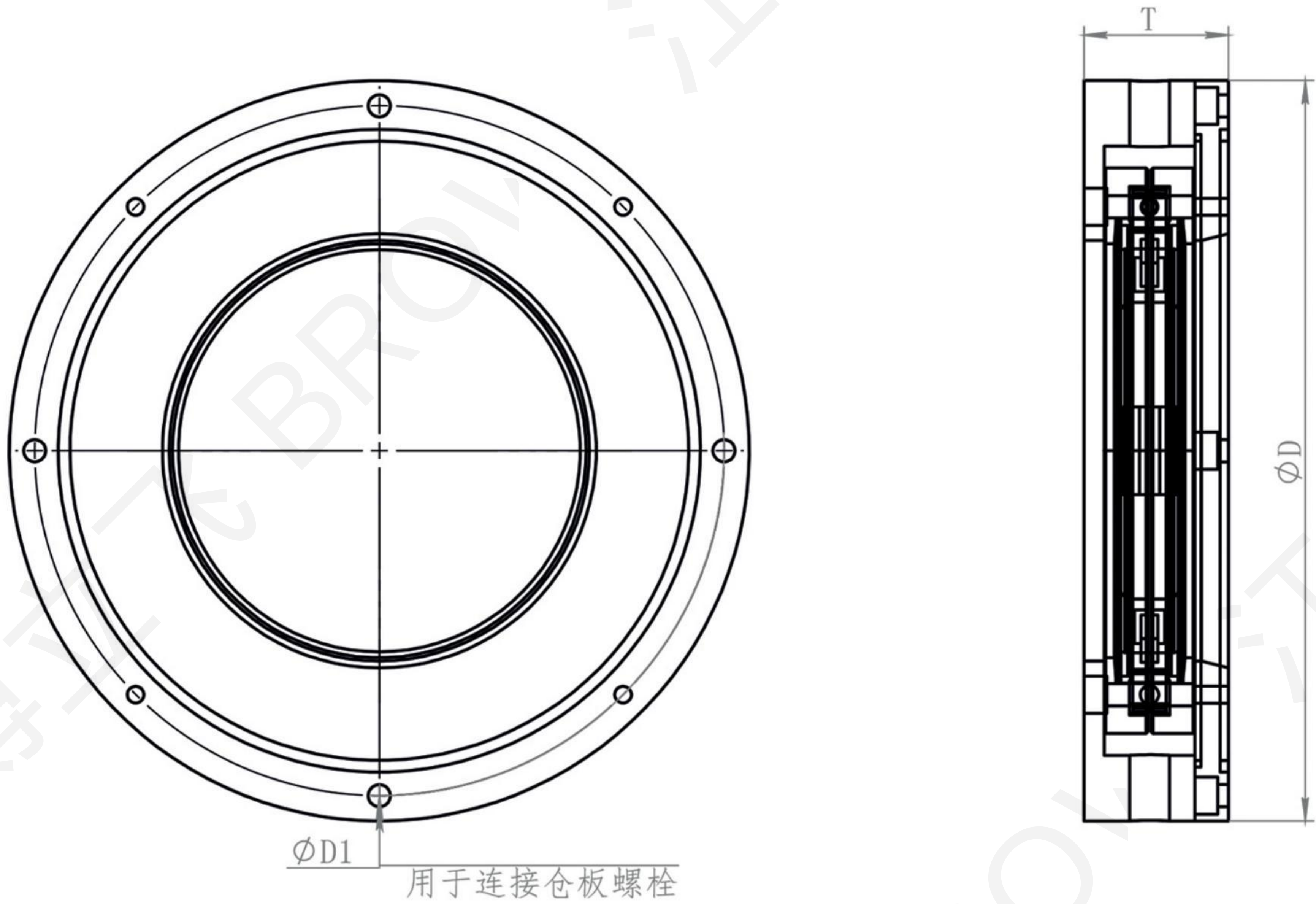


改造后



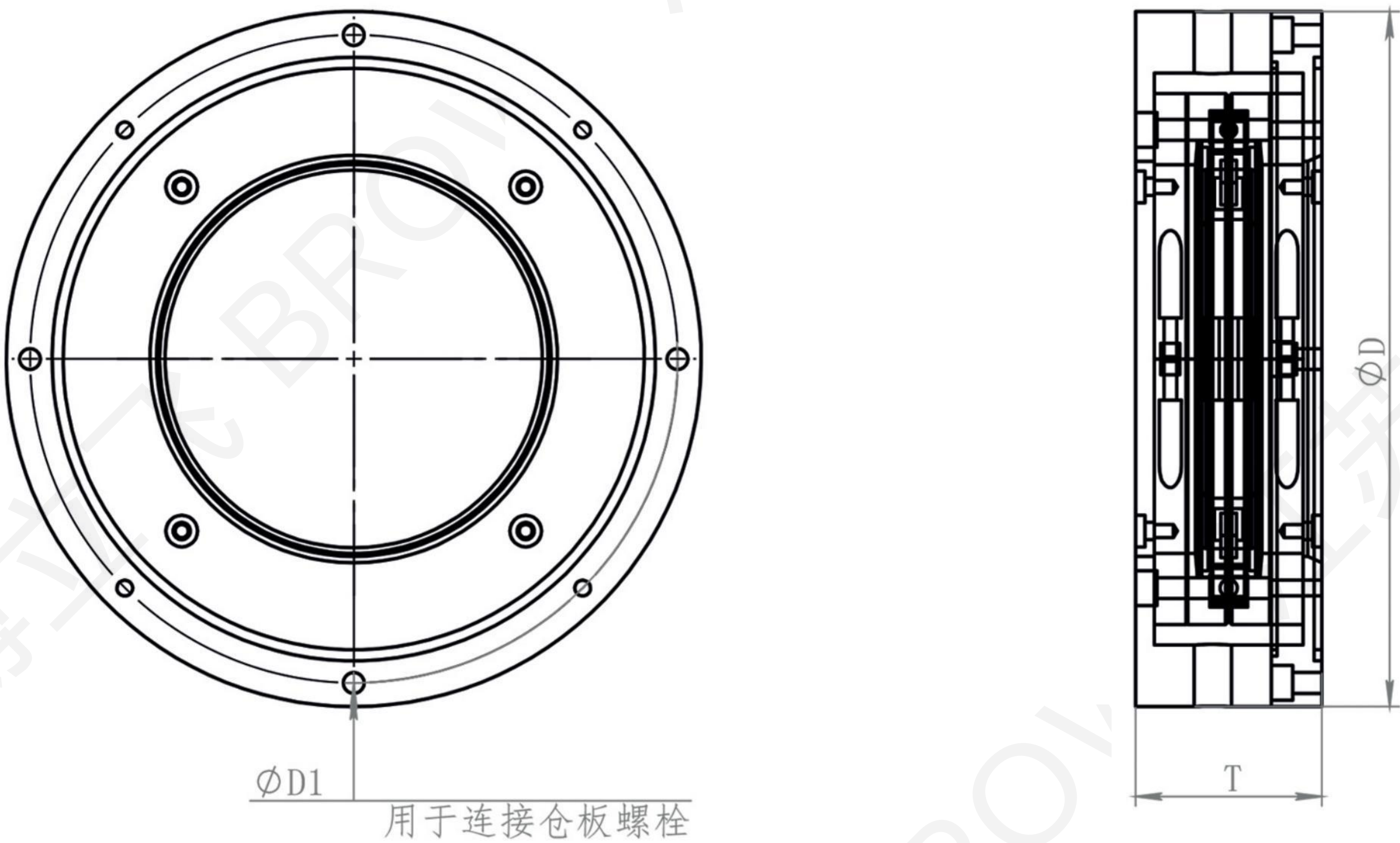
高性能旋转轴封·零泄漏、抗轴跳、低成本、安装改造

➤ BL-D系列外形尺寸



型号	轴径 d	外径 D	厚度 T	安装螺孔 D1
BL50-D	50	150	43	4*M6- ϕ 135
BL60-D	60	160	43	4*M6- ϕ 145
BL70-D	70	170	43	4*M6- ϕ 155
BL80-D	80	180	43	4*M6- ϕ 165
BL90-D	90	190	43	4*M6- ϕ 175
BL100-D	100	200	43	4*M6- ϕ 185
BL110-D	110	210	43	4*M6- ϕ 195
BL120-D	120	220	43	4*M6- ϕ 205
BL130-D	130	230	43	4*M6- ϕ 215
BL140-D	140	240	43	4*M6- ϕ 225
BL150-D	150	260	45	6*M8- ϕ 240
BL160-D	160	270	45	6*M8- ϕ 250
BL170-D	170	280	45	6*M8- ϕ 260
BL180-D	180	290	45	6*M8- ϕ 270
BL190-D	190	300	45	6*M8- ϕ 280
BL200-D	200	310	52	6*M8- ϕ 290
BL210-D	210	320	52	6*M8- ϕ 300
BL220-D	220	330	52	6*M8- ϕ 310
BL230-D	230	340	52	6*M8- ϕ 320
BL240-D	240	350	52	6*M8- ϕ 330
BL250-D	250	360	52	6*M10- ϕ 340
BL260-D	260	370	52	6*M10- ϕ 350

➤ BL-DJ系列外形尺寸



型号	轴径 d	外径 D	厚度 T	安装螺孔 D1
BL50-DJ	50	150	59	4*M6-Φ135
BL60-DJ	60	160	59	4*M6-Φ145
BL70-DJ	70	170	59	4*M6-Φ155
BL80-DJ	80	180	59	4*M6-Φ165
BL90-DJ	90	190	59	4*M6-Φ175
BL100-DJ	100	200	59	4*M6-Φ185
BL110-DJ	110	210	59	4*M6-Φ195
BL120-DJ	120	220	59	4*M6-Φ205
BL130-DJ	130	230	59	4*M6-Φ215
BL140-DJ	140	240	59	4*M6-Φ225
BL150-DJ	150	260	59	6*M8-Φ240
BL160-DJ	160	270	59	6*M8-Φ250
BL170-DJ	170	280	59	6*M8-Φ260
BL180-DJ	180	290	59	6*M8-Φ270
BL190-DJ	190	300	59	6*M8-Φ280
BL200-DJ	200	310	59	6*M8-Φ290
BL210-DJ	210	320	59	6*M8-Φ300
BL220-DJ	220	330	59	6*M8-Φ310
BL230-DJ	230	340	59	6*M8-Φ320
BL240-DJ	240	350	59	6*M8-Φ330
BL250-DJ	250	360	62	6*M10-Φ340
BL260-DJ	260	370	62	6*M10-Φ350



零泄漏



抗轴跳



低成本



安装改造

江苏博立飞自动化科技有限公司

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