

股票代码 Stock Code: 301456



总部位于青岛,在北京、上海、汕头、德国汉堡等地设立多个办事处和分公司,同时在澳大利亚、新西兰、印尼、俄罗斯、荷兰、西班牙、美国、印度等地发展设立了众多经销商,便于为国内外客户提供迅捷的售后服务与技术支持。

Headquarters is located in Qingdao, Offices and branches are set up in Beijing, Shanghai, Shantou, Hamburg, Germany etc. At the same time,numerous distributors are developed and set up in Australia, New Zealand, Indonesia, Russia, the Netherlands, Spain ,the United States, India etc. Domestic and overseas customers can receive rapid after-sales service and technical support conveniently .



盘古智能订阅号
WeChat Public



盘古智能服务号
WeChat Service



盘古智能官网
Company Website

<http://www.paguld.com>

青岛盘古智能制造股份有限公司

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QINGDAO PAGULD INTELLIGENT MANUFACTURING CO., LTD.

Add: 77 Kehai Road, High-tech Zone, Qingdao, China
E-mail: sales@paguld.com
National toll free telephone: 400-0532-090

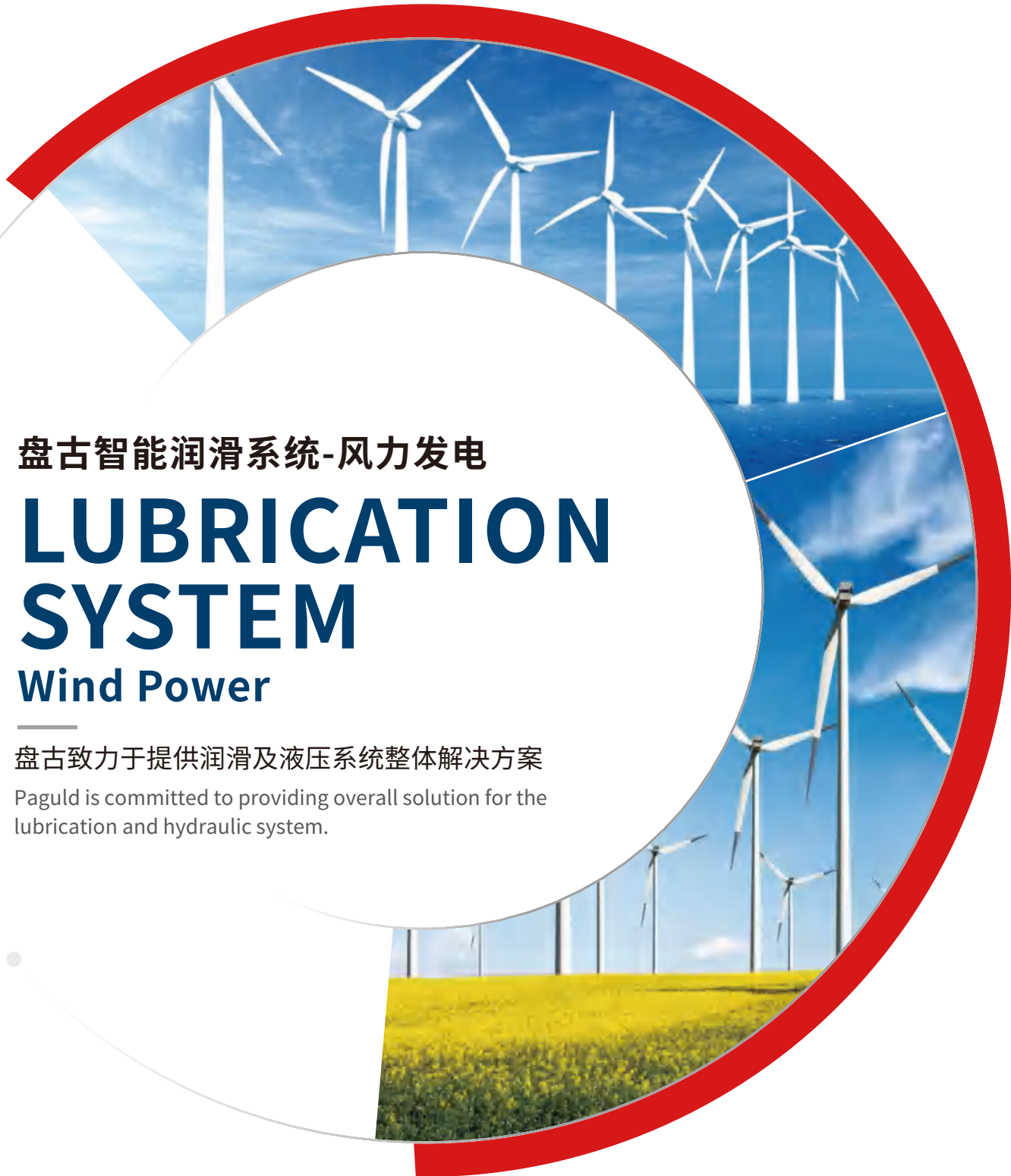
PGRHXT-FLFD202504

盘古智能润滑系统-风力发电

LUBRICATION SYSTEM Wind Power

盘古致力于提供润滑及液压系统整体解决方案

Paguld is committed to providing overall solution for the lubrication and hydraulic system.



企业使命 CORPORATE MISSION

让生活变得更加美好

Make life better

企业愿景 PAGULD'S VISION

成为世界一流的润滑与液压系统制造商

To be the world-class lubrication,
hydraulic system manufacturer and solution provider

企业经营理念 BUSINESS PHILOSOPHY

精心研发、精益生产、精湛品质、精诚合作

Deliberate research and development, Lean manufacturing,
exquisite quality and sincere cooperation

盘古是民族的
更是世界的
For Nation and World

盘古智能
勇攀高峰
Scale New Heights
Bravely

盘古润滑
使命必达
Mission Must
Be Reached

COMPANY INTRODUCTION

Qingdao Paguld Intelligent Manufacturing Co., Ltd was founded in 2012, (stock code: 301456) is a joint-stock enterprise integrating R&D, manufacturing and sales. Paguld is committed to developing centralized lubrication systems and hydraulic system with independent intellectual property rights and core competitiveness, and provide competitive overall solutions for domestic and oversea customers.

As a professional enterprise, Paguld has obtained for a number of national invention patents. Our products are widely used in wind power equipment, wheel flange, railway, engineering machinery, commercial vehicle, large-scale machinery in mining, ports and other fields.

Paguld has passed ISO9001, IATF 16949, IRIS (ISO/TS 22163) quality management system certification and the certification of CE,ETL,PED etc for products and obtained CNAS L16139 laboratory accreditation certificate.

Upholding the business philosophy of "dedicated research & development, lean production, excellent quality and sincere cooperation", Paguld has brought in the first-class talents and become the customer's trustworthy partner.



一期工厂鸟瞰图
Aerial view of phase 1 of the factory

公司介绍

青岛盘古智能制造股份有限公司(股票代码:301456)创建于2012年,是一家集研发、生产、销售为一体的股份制企业。公司致力于发展具有自主知识产权和核心竞争力的集中润滑系统和液压系统技术,为国内外客户提供经济高效的整体解决方案。

盘古智能作为专业的集中润滑系统和液压系统研制企业,已申请多项国家发明专利,产品广泛运用于风电设备、机车润滑、轨道润滑、工程机械、商用车辆、港口设备等领域。

公司已通过ISO9001、IATF 16949、IRIS (ISO/TS 22163)质量管理体系认证,产品通过CE、ETL、PED等认证,获得CNAS L 16139实验室认可证书。

公司本着“精心研发、精益生产、精湛品质、精诚合作”的经营理念,凝聚一流的人才,成为客户值得信赖的合作伙伴。

100 亩
园区占地
The factory occupies an area of approximately 16.5 acres

44000 m²
一期建筑面积
Phase 1 of the factory: 44000m²

40000 m²
二期建筑面积
Phase 2 of the factory: 40000 m²



二期工厂效果图
Rendering of phase 2 of the factory

发展历程

MILESTONE

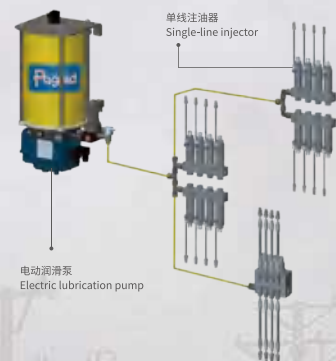
2012

青岛盘古公司成立, 注册
“Paguld” 品牌
"Paguld" brand registered

Paguld®

2013

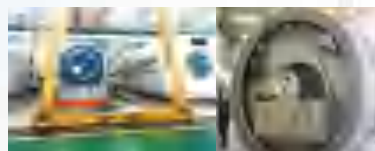
自主研发出第一套风机集中润滑系统
The first set of Paguld wind turbine
centralized lubrication system



2014

样机通过金风科技测试验证, 上海电气、西门子样机验收成功

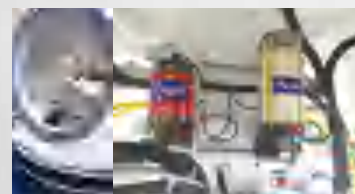
The prototype of lubrication system has passed the test of Goldwind, Shanghai Electric and Siemens



Goldwind 金风科技
SHANGHAI ELECTRIC 上海电气
SIEMENS 西门子

2015

实现对金风科技批量供货
Begin to bulk supply for Goldwind



2016

自主研发的海上机组润滑系统成功装机测试
成为东方电气、联合动力等国内主流风机厂家供应商

Paguld offshore wind turbine lubrication system was successfully installed and tested
Become the supplier of domestic mainstream wind turbine manufacturers such as DEC and United Power



DEC 东方电气
DONGFANG ELECTRIC

2017

获得美国GE订单
通过Vestas和SGRE供应商体系审核

Get orders from GE
Become qualified supplier for Vestas and SGRE

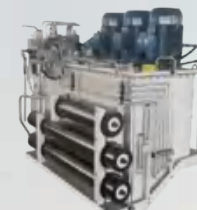
Vestas SIEMENS Gamesa
RENEWABLE ENERGY



2018

液压项目部成立
成为远景能源战略供应商

Hydraulic Project Department established
Become ENVISION's strategic supplier



ENVISION

2020

盘古润滑·液压智造中心奠基
实现对三一重能、中国海装、运达股份的批量供货

Paguld lubrication & hydraulic Intelligent center laid foundation
Begin to bulk supply for SANY, CSSC and WINDEY



SANY 三一重能
WINDEY 运达风电
CSSC 中国海装

2022

盘古智能创业板IPO成功过会
批量供货全球知名起重机制造商 Manitowoc

Paguld's IPO on the GEM successfully passed the audit of CSRC
Begin to bulk supply for the world famous crane manufacturer Manitowoc



Manitowoc

2021

轮缘润滑系统批量交付中车四方股份, 成功推进国内轨道交通润滑技术国产化
中车风电润滑和液压系统样机试装成功

Paguld wheel flange lubrication system begin to bulk supply for CRRC
Paguld lubrication and hydraulic prototype has passed the test of CRRC Wind Power

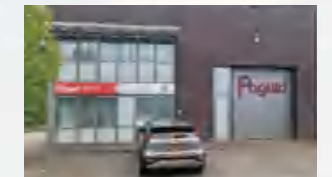


轮缘润滑系统
Wheel flange lubrication system

2024

盘古智能欧洲全资子公司挂牌投入使用, 为全球客户提供优质高效的服务

The wholly-owned subsidiary of Paguld Europe is put into use to provide high-quality and efficient service for global customers

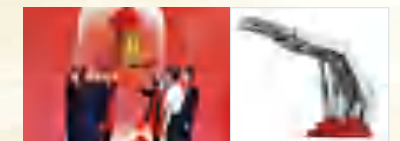


2023

盘古智能在深交所敲钟, 股票代码: 301456

矿用机械液压阀组实现产品验证和批量供货

Listed on the Shenzhen Stock Exchange, stock code: 301456
The hydraulic valve group of mining machinery product was qualified and began to batch supply



始于客户需求, 终于客户满意
在为客户创造价值的路上, 盘古永远执着

Start with customers' need, succeed with customers' satisfaction
Paguld insist on create values for customers

核心客户

MAIN CUSTOMERS

用品质与服务帮助企业提升自身效率, 实现品牌价值, 使企业走向卓越
Help enterprises improve their efficiency with quality and service, achieve brand value and make to excellence



知识产权/体系认证

INTELLECTUAL PROPERTY&SYSTEM CERTIFICATES

公司致力于发展具有自主知识产权和核心竞争力的集中润滑技术及液压系统, 取得发明及实用新型专利数十项, 其中多项专利填补国内外空白。
盘古智能全力为客户提供满意的技术与产品, 构建了完善的生产制造、质量控制与经营服务体系。先后通过多项管理体系认证、产品认证。
Paguld is committed to developing centralized lubrication technology and hydraulic system with independent intellectual property rights and core competitiveness. We have obtained dozens of invention and utility model patents, many of which fill the gaps at home and abroad.
Paguld is committed to providing customers with the satisfactory technology and products, and has built a perfect manufacturing, quality control and business service system. Paguld has obtained a number of certificates of products and management systems.



研发及检测平台

R&D AND TESTING PLATFORM

时刻关注客户的需要,精心开发符合客户需求的产品,时刻关注行业发展趋势,精心研发前沿技术的产品。
盘古智能质量检验检测中心汇集了目前行业先进的检测仪器与设备,定制化的测试平台为盘古智能研发新的系统与产品、为探索未知的应用领域提供了有力保障。

Focus on the needs of customers and the development trend of the industry, to develop the technology and products.
Paguld Quality Inspection and Testing Center collects advanced testing instruments and equipment in the industry. The customized testing platform provides a strong guarantee to develop new systems and products and explore the unknown application fields.



公司研发团队现有专业研发人员数十人,其中包括技术工程师、测试工程师、工艺专家等中高级职称人员。
Paguld's R & D team has dozens of professional R&D personnel, including technical engineers, test engineers, process experts and other senior titles.



零部件检测设备 Parts testing equipment

- ▶ 海克斯康三坐标
Hexagon CMM
- ▶ 日本三丰圆度仪
Mitutoyo roundness meter
- ▶ 日本三丰粗糙度仪
Mitutoyo Roughness Tester
- ▶ 气动量仪(美国)
Pneumatic measuring instrument (USA)
- ▶ 清洁度检测设备
Cleanliness testing equipment
- ▶ X射线涂层厚度测试仪
X-ray coating thickness tester
- ▶ 数显式拉力试验机弹簧检测仪器
Digital display tensile testing machine
- ▶ 精密型盐水喷雾试验机
Precision salt spray test machine
- ▶ 台式直读光谱仪
FOUNDRY-MASTER Smart spectrograph

系统产品检测设备 System product testing equipment

- ▶ 振动试验台
Vibration test bench
- ▶ 胶管耐压测试台
Hose pressure test bench
- ▶ 环境模拟测试平台
Environment simulation test platform
- ▶ 分配器检测、阀芯、安全阀、注油器专用检测设备
Special testing equipment for distributor testing, Pump plunger, safety valve, injector
- ▶ 轮毂试验平台
Hub test platform
- ▶ 液压站综合测试平台
Hydraulic station integrated test platform
- ▶ 液压变桨系统综合测试平台
Hydraulic pitch systems integrated test platform

成为世界一流的润滑与液压系统制造商
To be the world-class lubrication, hydraulic system manufacturer and solution provider

生产能力

PRODUCTION CAPACITY

精益生产, 持续改善是企业发展的基石
Lean production and continuous improvement
is the foundation of development

一流的品质源于一流的生产设备和一流的检验检测平台, 公司现有加工中心、数控车床、磨床等各类设备100多台, 有效保证了系统部件的制造精度, 所有核心产品的配合精度均达到 μm 级, 高精度的零部件加工保证了产品的高可靠性。

First-class quality comes from first-class production equipment and super first-class inspection and testing platform, Paguld has more than 100 sets of machining centers, CNC lathes, grinding machines and other kinds of equipment, effectively ensure the manufacturing accuracy of system components; The precision of all core products is up to μm level, and the high-precision parts processing ensures the high reliability of products.



► 柔性自动化生产线FMS-5000L/FMS-6000L
Flexible Manufacturing System-5000L/6000L



- | | |
|---|---|
| ► MAZAK卧式加工中心 HCH-5000L
MAZAK HCH-5000L | ► MAZAK立式加工中心NM415/DT400/DNM415/DT405
MAZAK NM415/DT400/DNM415/DT405 |
| ► 日本泷泽数控车 XEX-108
Takisawa XEX-108 | ► 台湾及国产全技能CNC
Full-skill CNC |
| ► 斗山复合式数控车
Doosan composite CNC lathe | ► 平面磨、无心磨床、外露磨床、内孔珩磨设备
Surface grinder, centerless grinder, cylindrical grinder, inner hole quilting equipment |
| ► 津上走心机BO205-III
Tsugami BO205-III | ► 普通车床、立铣、卧铣、双面铣床、六角车床等设备
Ordinary lathes, milling machines, hexagonal lathes, etc. |
| ► 西铁城走心机L32-1M9/A20-3F7
Citizen centrifuge L32-1M9/A20-3F7 | |

阀块处理设备
Valve block Processing Equipment



热能去毛刺机
Thermal deburring machine



自动超声波清洗设备
Automatic ultrasonic cleaning equipment



卧式加工中心
Horizontal machining centre

产品中心
PRODUCT CENTER

精湛品质是我们赢得客户信任与尊重的基础
是盘古团队为之努力奋斗的方向
Exquisite quality is the basis for us to win trust and respect
and it is the driving force for Paguld to work hard for it

在盘古智能, 精益求精与不断创新从未停止, 经过多年的研发积累, 盘古智能系列产品相继投入市场。
面对传统制造业转型升级的发展趋势, 盘古智能以更坚实的步伐, 再一次走在行业前列。
In Paguld Intelligent, excellence and innovation never stop, series of products have been put into the market
after years of accumulation of research and development.
Facing the development trend of transformation and upgrading of traditional manufacturing industry, Paguld
takes a more solid step and once again takes the lead in the industry.

集中润滑系统 Centralized Lubrication System



集中润滑系统优点

- 定时、定点、定量、定序加注润滑脂
- 避免人工加脂遗漏润滑点
- 润滑周期准确，定量给脂精确，节省油脂，减少对环境的污染
- 系统压力高，用脂范围宽
- 结构紧凑、性能优异、便于安装、易检查维修
- 对设备零件的有效润滑，提高其使用寿命，降低了维修成本
- 具有故障报警功能，对润滑系统进行全程监控
- 节省油脂，保护环境

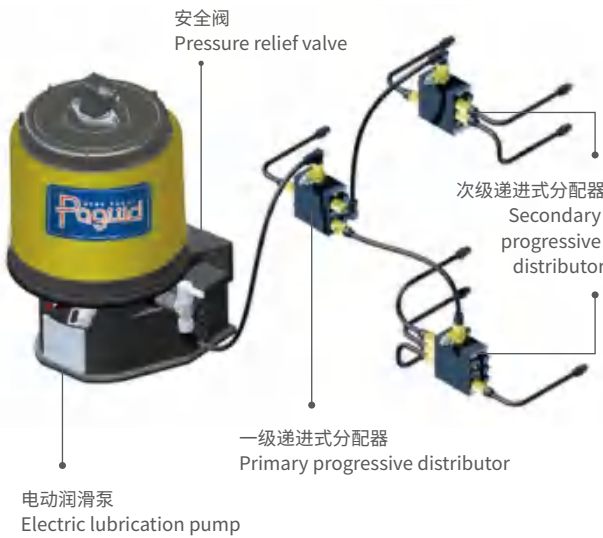
The advantages of centralized lubrication system

- Grease or oil injection according to fixed time, position, quantity and sequence
- Missing lubrication point through artificial injection can be avoided
- Precise grease or oil injection schedule and quantity, reduced lubricant consumption and environment pollution
- High-pressure system and grease or oil species with wide range
- Compact structure, excellent performance, easy to install and easy to maintenance
- Effective lubrication for equipment components, improved equipment service life, reduced cost of maintenance
- Fault alarm function and full-time monitoring for lubrication system
- Save lubricant and protect the environment

递进润滑系统 Progressive lubrication system

递进式润滑系统由电动润滑泵、递进式分配器、管路附件、控制部分组成。分配器在泵压的作用下，将润滑剂以递进方式输送到各个润滑点。系统注油量准确，可高压、定量、间隙式在较大的温差下工作，且便于安装、调整和维护。

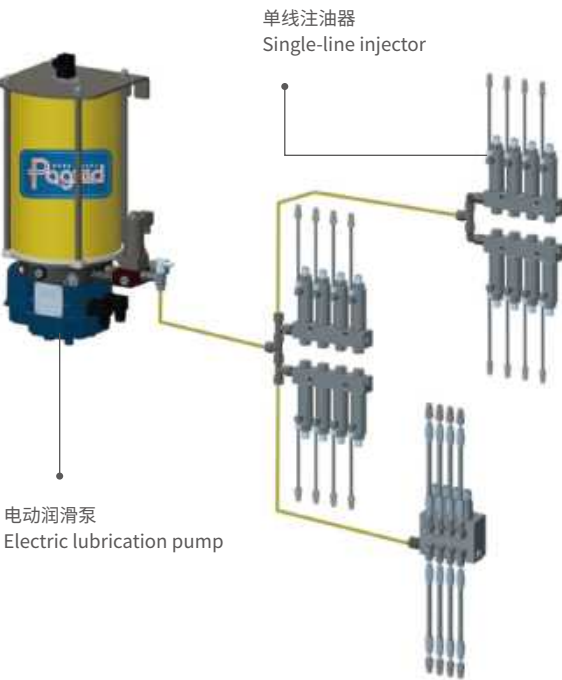
It is composed of electric lubrication pump, progressive distributor, pipeline accessories and control parts. The distributor delivers the lubricant to each lubrication point in a progressive way under the pump pressure. With an accurate amount of grease injection, the system can perform high- pressure, quantitative intermittent work under relatively large temperature difference. It is also convenient for installation, adjustment and maintenance.



单线润滑系统 Single-line lubrication system

Paguld单线集中润滑系统由电动润滑泵、控制系统、单线注油器、管路附件等构成。
一条主管路，各注油器相对独立，局部润滑支路失效不影响其它支路正常工作；易于安装和操作，可以方便地进行系统扩展。

It is composed of electric lubrication pump, control system, single-line injector, pipeline accessories, etc.
A main line, each injector is relatively independent, local lubrication branch failure does not affect the normal operation of other branches; easy to install and operate, can be convenient for system expansion.



Paguld齿面油脂喷射系统
Paguld gear grease spray system

Paguld齿面油脂喷射系统由电动润滑泵、控制系统、齿面油脂喷射组件、管路附件等构成。齿面油脂喷射系统的核心在于独特的喷射单元设计。通过内置的蓄能器实现主动喷射，相对于传统的喷射系统无需气源辅助，结构简单，安装调试更加便捷，易于维护。主要用于解决齿轮啮合点磨损严重问题。

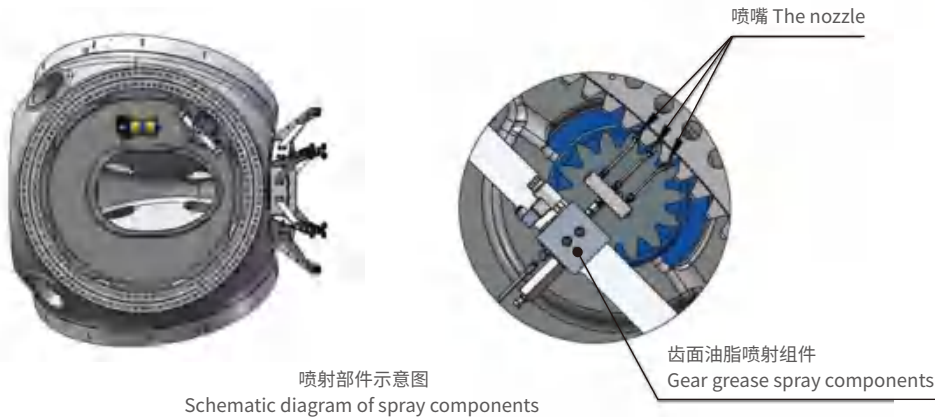
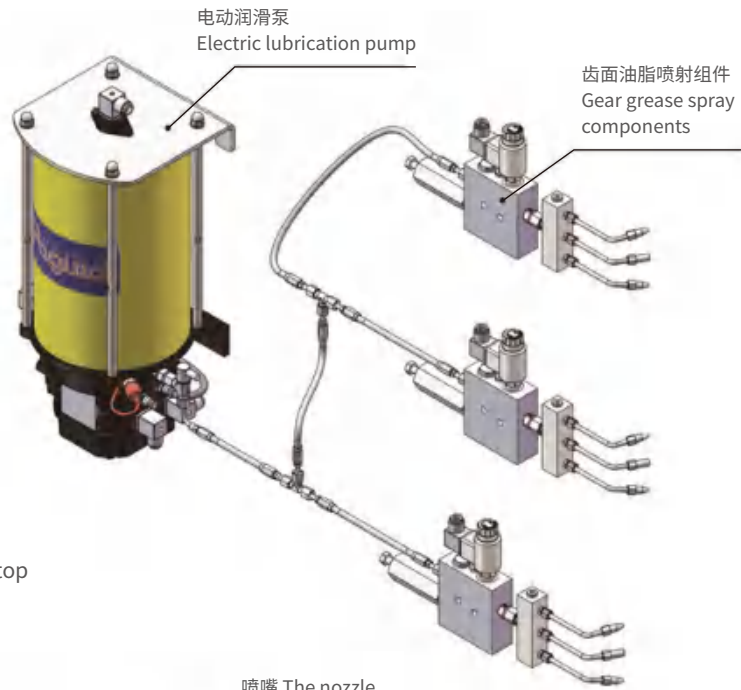
Paguld gear grease spray system is composed of electric lubrication pump, control system, gear grease spray components, pipeline accessories, etc. Gear grease spray system is the unique spray unit design. Through the built-in accumulator to achieve active spray, compared with the traditional spray system without air source assistance, the advantage is simple structure, installation and debugging more convenient, maintain easily. It is mainly used to solve the problem of severe wear at the gear meshing point.

齿面油脂喷射系统特点

- 润滑剂精准喷射
- 少量的润滑剂消耗
- 无过度润滑，无污染
- 无需其他部件驱动
- 齿轮啮合和停止时，亦可喷射润滑剂
- 准确检测润滑剂的使用情况

Features of gear grease spray system

- Lubricant precision injection
- Small amount of lubricant consumed
- No excessive lubrication, no pollution
- No other components are required to drive
- Lubricants can also be sprayed when gears engage and stop
- Accurately detect the use of lubricants



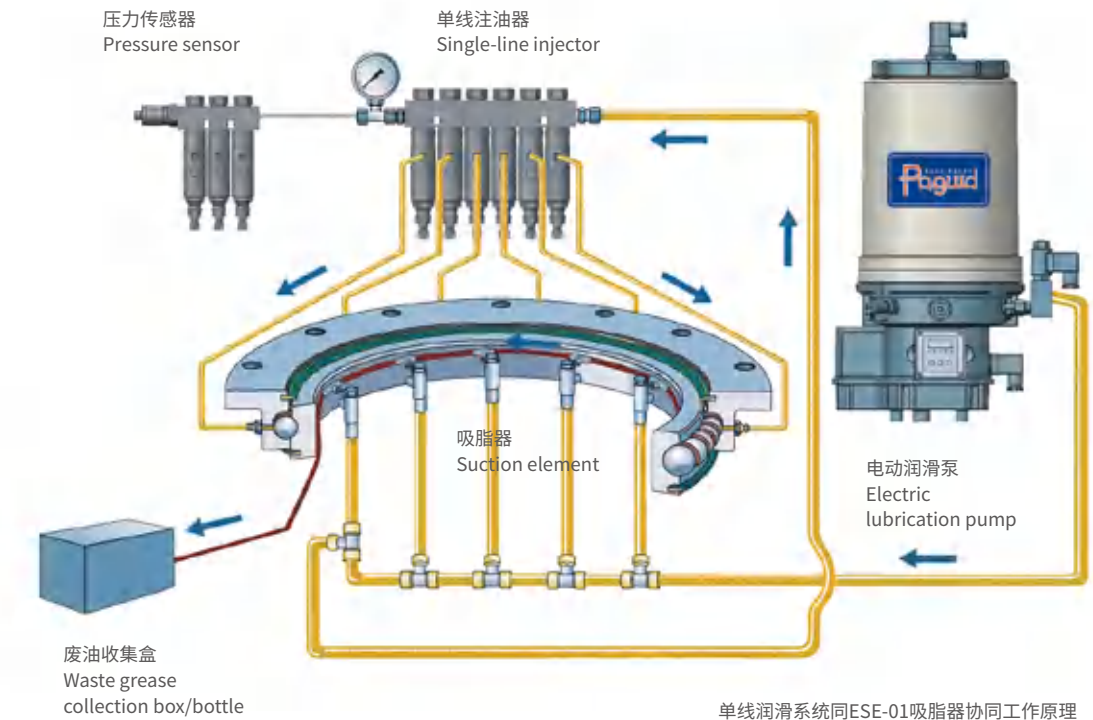
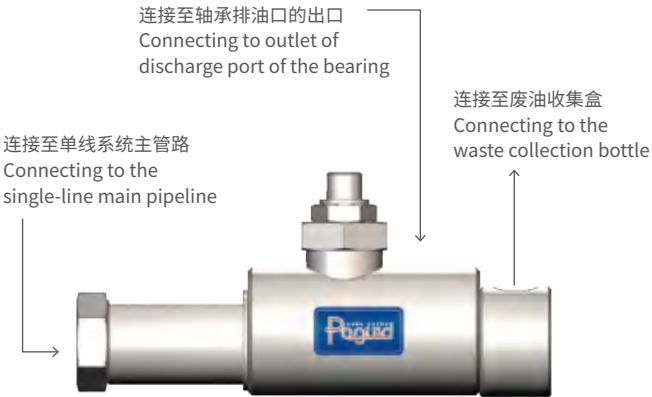
单线及废油脂辅助回收系统
Waste grease auxiliary recovery and single-line system

吸脂器

ESE-01吸脂器专门开发用于MW级风力发电机组的轴承，同单线润滑系统配套，吸取轴承内的废旧油脂。

Suction Element

ESE-01 suction element is specially developed and applied to the generator bearing of MW grade wind turbine. It absorbs the waste grease in the bearing, along with the single-line lubrication system.



单线润滑系统同ESE-01吸脂器协同工作原理
Cooperative working principle of single-line system and ESE-01 suction

电动润滑泵PG203系列 PG203 Series of Electric Lubrication Pump

PG203电动润滑泵是一台性能优良的中央自动集中润滑泵，最多可支持3个泵芯单元，适用于递进式集中润滑系统中，适用于风电机组发电机集中润滑系统。

通用性强，结构小巧紧凑，工作性能优异，采用一体化泵座主壳，以其极高的经济性使得PG203电动润滑泵得到广泛应用，同时可选配低油位报警、堵塞报警和控制单元，极大扩展了PG203电动润滑泵的行业应用范围。

The PG203 electric lubrication pump is an automatic centralized lubrication pump with excellent performance that can support up to three pump elements. Suitable for centralized lubrication system of wind turbine generator.

It boasts strong versatility, a compact structure, and excellent working performance. The integrated pump base makes it highly economical and widely used. Besides, the system can be equipped with a low-level alarm, a blockage alarm, and a control unit, which greatly expands the industry application scope of the PG203 electric lubrication pump.



电动润滑泵PG230系列 PG230 Series of Electric Lubrication Pump

PG230电动润滑泵是一台性能优良的中央自动集中润滑泵，最多可支持4个泵芯单元，适用于递进式集中润滑系统中，常用于风电机组变桨、主轴、偏航等部位的集中润滑系统。

主体采用高强度轻质金属，产品具有优良的环境适应能力，模块化设计，规格可以灵活选择，同时可选配低油位报警、堵塞报警和控制单元，极大扩展了PG230电动润滑泵的行业应用范围。

The PG230 electric lubrication pump is an automatic centralized lubrication pump with excellent performance that can support up to 4 pump elements. It is suitable for progressive centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine Pitch , main bearing, yaw and other parts.

Its pump base made of high-strength lightweight metal further improves the seismic performance, Products have excellent environmental adaptability, modular design, specifications can be flexibly selected. Besides, it can be equipped with a low-level alarm, a blockage alarm, and a control unit, which greatly expand the industry application scope of the PG230 electric lubrication pump.



技术参数 Technical Parameters

系统压力 System pressure	35MPa						
储油罐容积 Volume of reservoir	1L、2L、4L、8L						
工作电压 Operating voltage	12VDC、24VDC、230VAC						
泵芯单元 mL/分钟 Pump element mL/minute	K5 2.0	K6-2.5 2.5	K6 2.8	K7 4.0	K8 5.0	KR7 0.7-3	KR8 1.3-5
泵芯数量 Number of pump element	1-3个 1-3 pieces						
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread						
工作温度 Operating temperature	-40℃～+80℃						
防护等级 Protection class	IP65						
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#						

技术参数 Technical Parameters

系统压力 System pressure	35MPa						
储油罐容积 Volume of reservoir	4L、6L、8L、10L、12L、15L、20L、25L、30L、40L						
工作电压 Operating voltage	12VDC、24VDC、230VAC						
泵芯单元 mL/分钟 Pump element mL/minute	K5 2.0	K6-2.5 2.5	K6 2.8	K7 4.0	K8 5.0	KR7 0.7-3	KR8 1.3-5
泵芯数量 Number of pump element	1-4个 1-4 pieces						
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread						
工作温度 Operating temperature	-40℃～+80℃						
防护等级 Protection class	IP65						
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#						

电动润滑泵PG231系列
PG231 Series of Electric Lubrication Pump

PG231电动润滑泵是一台性能优良的中央自动集中润滑泵，最多可支持4个泵芯单元，适用于递进式集中润滑系统中，常用于风电机组变桨、主轴、偏航、发电机等部位的集中润滑系统。

通用性强，工作性能稳定，泵座和壳体采用一体化设计，结构更加小巧紧凑，同时可选配低油位报警、堵塞报警和控制单元，极大扩展了PG231电动润滑泵的行业应用范围。

The PG231 electric lubrication pump is an automatic centralized lubrication pump with excellent performance that can support up to 4 pump elements. It is suitable for progressive centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine Pitch , main bearing, yaw,turbine and other parts.

It boasts strong versatility, a compact structure, and excellent working performance.The pump base and housing are integrated design, making the structure more compact and compact . Besides, it can be equipped with a low-level alarm, a blockage alarm, and a control unit, which greatly expand the industry application scope of the PG231 electric lubrication pump.



电动润滑泵PG230-PLUS系列
PG230-PLUS Series of Electric Lubrication Pump

PG230-PLUS电动润滑泵是一台性能优良的中央自动集中润滑泵，最多可支持4个泵芯单元，适用于单线式集中润滑系统中，适用于风电机组变桨、主轴、偏航等部位的集中润滑系统。

PG230-PLUS电动润滑泵采用分段式设计，采用高强度轻质合金加工，产品具有优良的环境适应能力。泵芯单元通过泵座内部油路贯通，外部布置简洁美观，便于更换和维护。适配单线式润滑系统具有极高的可靠性，对于要求高可靠性和难以维护的设备特别适用。

The PG230-PLUS electric lubrication pump is an automatic centralized lubrication pump with excellent performance that can support up to four pump elements. It is suitable for single-line centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine Pitch , main bearing, yaw and other parts.

PG230-PLUS electric lubrication pump adopts a segmented design and high-strength light alloy, which give the whole structure excellent working performance. The pump elements are connected with each other through an internal grease circuit in the pump base; the simple exterior layout makes it to be replaced and maintained. The outlet of the electric lubrication pump is provided with a pressure monitoring unit and a pressure relief unit for pressure control, ensuring the normal lubrication of the whole system.



技术参数 Technical Parameters

系统压力 System pressure	35MPa						
储油罐容积 Volume of reservoir	1L、2L、4L、6L、8L、10L、12L、15L						
工作电压 Operating voltage	12VDC、24VDC、230VAC						
泵芯单元 mL/分钟 Pump element mL/minute	K5	K6-2.5	K6	K7	K8	KR7	KR8
	2.0	2.5	2.8	4.0	5.0	0.7-3	1.3-5
泵芯数量 Number of pump element	1-4个 1-4 pieces						
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread						
工作温度 Operating temperature	-40℃ ~ +80℃						
防护等级 Protection class	IP65						
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#						

技术参数 Technical Parameters

系统压力 System pressure	35MPa						
储油罐容积 Volume of reservoir	4L、6L、8L、10L、12L、15L、20L、25L、30L、40L						
工作电压 Operating voltage	12VDC、24VDC、230VAC						
泵芯单元 Pump element	3K7、3K8（常规配置）3K7、3K8（General configuration）						
	12mL/分钟、15mL/分钟 12mL/minute、15mL/minute						
泵芯数量 Number of pump element	3-4个 3-4 pieces						
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread						
工作温度 Operating temperature	-40℃ ~ +80℃						
防护等级 Protection class	IP65						
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#						

电动润滑泵PG230M系列 PG230M Series of Electric Lubrication Pump

PG230M电动润滑泵是一台性能优良的中央自动集中润滑泵，最多可支持4个泵芯单元，不仅适用于递进式集中润滑系统，通过模块更换也可以适用于单线式或双线式润滑系统，常用于风电机组主轴、偏航等部位的集中润滑系统。

主体均采用金属材质，产品具有优良的环境适应能力，模块化设计，规格可以灵活选择，同时可选配低油位报警、堵塞报警和控制单元，极大扩展了PG230M电动润滑泵的行业应用范围。

The PG230M electric lubrication pump is an automatic centralized lubrication pump with excellent performance that can support up to 4 pump elements. It is suitable for progressive centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine Pitch , main bearing, yaw and other parts.

Its pump base made of high-strength lightweight metal further improves the seismic performance,Products have excellent environmental adaptability, modular design, specifications can be flexibly selected. Besides, it can be equipped with a low-level alarm, a blockage alarm, and a control unit, which greatly expand the industry application scope of the PG230 electric lubrication pump.



技术参数 Technical Parameters

系统压力 System pressure	35MPa			
储油罐容积 Volume of reservoir	30L、40L、50L、80L、100L			
工作电压 Operating voltage	24VDC、230VAC			
泵芯单元 mL/分钟 Pump element mL/minute	K5 2.0	K6-2.5 2.5	K6 2.8	K7 4.0
泵芯数量 Number of pump element	1-4个 1-4 pieces			
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread			
工作温度 Operating temperature	-40℃ ~ +80℃			
防护等级 Protection class	IP65			
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#			

电动润滑泵GLP系列 GLP Series of Electric Lubrication Pump

GLP系列润滑泵采用模块化设计方案，其实用性非常广泛，不仅能够适用于递进式润滑系统，而且通过相对简单的柱塞泵模块更换就可以适用于单线式或双线式润滑系统。

GLP 润滑泵主体采用全金属设计，传动轴上布置有螺旋输送机构，能够有效将高粘度油脂输送至泵芯，专门为严苛工况开发。

GLP series of lubrication pump adopts modular design with high degree of generalization, it can not only be applied to progressive lubrication systems, but also can be applied to single-wire or double-wire lubrication systems through relatively replacement of simple piston pump module.

The main body of the GLP lubrication pump adopts an all-metal design, a screw conveyor mechanism is equipped on transmission shaft, can effectively transport high viscosity grease to the pump element. This product is specially designed for harsh operating conditions.



技术参数 Technical Parameters

系统压力 System pressure	40MPa
储油罐容积 Volume of reservoir	15L、30L、60L、80L
工作电压 Operating voltage	400VAC/690VAC
泵芯单元 mL/分钟 Pump element mL/minute	K8:11.2mL/分钟 K8:11.2mL/minute
泵芯数量 Number of pump element	1-6个 1-6 pieces
出油口螺纹 Grease outlet thread	G1/4内螺纹 G1/4 inner thread
工作温度 Operating temperature	-40℃ ~ +80℃
防护等级 Protection class	IP54
使用润滑剂 Grease	NLGI 2#及其以下润滑剂 Up to NLGI 2#

电动润滑泵ELP2系列
ELP2 Series of Electric Lubrication Pump

ELP2电动润滑泵是一台性能优良的中央自动集中润滑泵，适用于单线式集中润滑系统，用于风电机组主轴部位的集中润滑系统。

ELP2电动润滑泵采用模块化设计，集成有电动泵、大容量储油罐、电气盒、单线注油器等部件，产品具有优良的环境适应能力。同时可选配低油位报警、堵塞报警及控制单元，极大扩展ELP2电动润滑泵的行业应用范围。大容量、高稳定性的特点，使其特别适用于可靠性要求高和难以维护的设备。

The ELP2 electric lubrication pump is an automatic centralized lubrication pump with excellent performance. It is suitable for single-line centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine main bearing.

ELP2 electric lubrication pump adopts modular design, integrated with electric pump, large capacity reservoir, electrical box, single line injector and other components, the product has excellent environmental adaptability. At the same time it can be equipped with low grease level alarm, blockage alarm and control unit, which greatly expands the industry application scope of ELP2 electric lubrication pump. The characteristics of large capacity and high stability make it especially suitable for equipment with high reliability requirements and difficult maintenance.



技术参数 Technical Parameters

系统压力 System pressure	35MPa
储油罐容积 Volume of reservoir	220L
工作电压 Operating voltage	24VDC
注油器每口排量 Injector's displacement of each outlet	0.1-0.7cc/cycle(Customizable)
工作温度 Operating temperature	-40℃ ~ +80℃
防护等级 Protection class	IP65
使用润滑剂 Grease	NLG12#及其以下润滑剂 Up to NLGI2#

电动润滑泵EBP系列
EBP Series of Electric Lubrication Pump

EBP电动润滑泵是一台性能优良的中央自动集中润滑泵，适用于单线式集中润滑系统，用于风电机组主轴部位的集中润滑系统。

EBP电动润滑泵采用模块化设计，集成有电动泵、电气盒、压油盘等部件，产品具有优良的环境适应能力。同时可选配低油位报警、堵塞报警及控制单元，极大扩展EBP电动润滑泵的行业应用范围。使用180Kg的标准油桶，大大降低了项目成本和现场补脂的操作便利性。

The EBP electric lubrication pump is an automatic centralized lubrication pump with excellent performance. It is suitable for single-line centralized lubrication systems and is commonly used in the centralized lubrication system of wind turbine main bearing.

EBP electric lubrication pump adopts modular design, integrated with electric pump, electrical box, follower plate and other components, the product has excellent environmental adaptability. At the same time it can be equipped with low grease level alarm, blockage alarm and control unit, which greatly expands the industry application scope of EBP electric lubrication pump. The use of 180Kg standard grease drum greatly reduces the project cost and the operation convenience of on-site grease replenishment.



技术参数 Technical Parameters

系统压力 System pressure	35MPa
适用油桶规格 Applicable drum specifications	180Kg标准油桶 180Kg standard oil drum
工作电压 Operating voltage	24VDC
电动泵排量 Electric pump displacement	30 ~ 300cc/min
工作温度 Operating temperature	-40℃ ~ +80℃
防护等级 Protection class	IP65
使用润滑剂 Grease	NLG12#及其以下润滑剂 Up to NLGI2#

电动多点泵MPG215系列
Electric Multi-point Pump MPG215 Series

MPG215 电动多点泵适用于多线式或者递进式集中润滑系统中。
该系列润滑泵最多可驱动 15 个泵芯进行泵送油脂，既可以直接向润滑点输送油脂，又
可以作为大型递进式集中润滑系统的泵站使用。同时采用高效率的蜗轮蜗杆减速器，
精巧的偏心驱动组件，优异的多量程驱动电机为润滑泵的可靠运行。

MPG215 electric multi-point pump is suitable for multi-line or progressive
centralized lubrication system.
This series of lubrication pumps can drive up to 15 pump cores to pump grease.It
can not only transports grease directly to the lubrication point, but also be used
as a pumping station for large progressive centralized lubrication systems. At the
same time, it adopts an efficient worm gear reducer, exquisite eccentric drive
components, excellent multi-range drive motor for the reliable operation of the
lubrication pump.

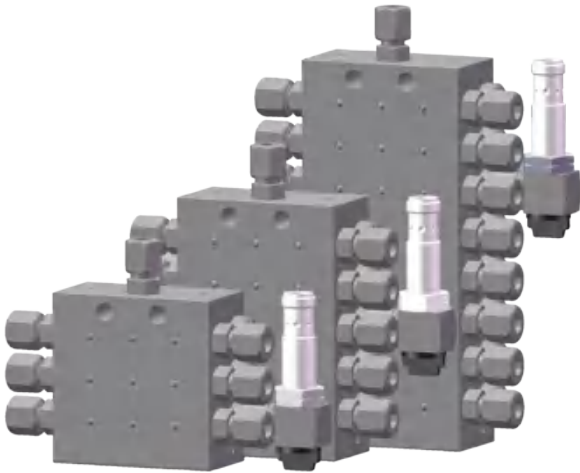


技术参数 Technical Parameters

系统压力 System pressure	35MPa
储油罐容积 Volume of reservoir	10L、30L、60L、100L
工作电压 Operating voltage	380-420VAC/50Hz 440-480VAC/60Hz
减速比 Reduction ratio	40:1/60:1/100:1 300:1/500:1
泵芯单元 Pump element	KR7: 0.1-0.34cc/cycle KR12: 0.29-1cc/cycle
泵芯数量 Number of pump element	1-15个
泵芯出油口螺纹 Pump core outlet thread	G1/4内螺纹(Female)
工作温度 Operating temperature	-40℃ ～ +80℃
防护等级 Protection class	IP55
使用润滑剂 Grease	NLGI 2#及其以下润滑剂Up to NLGI2#

PG-SSV分配阀
PG-SSV Distributor

PG-SSV分配阀是一种单次供给定量油脂的柱塞式阀。该分配阀可
以通过堵住一个出口，将被堵出口的油脂供给到下一个出口，从而
使下个油口的油量翻倍，进而实现不同油脂需求量的目的。
PG-SSV分配阀最大的特点是各出口是递进关系，后一个出口必须
等到前一个出口出脂后才能出脂，根据这一特点可以通过增加目
视化装置或者电子监控装置判定分配阀工作状态。
分配阀出口数为6-24 (均为偶数)，可以使用最高NLGI 2#及其以下
的油脂，或黏度大于40cSt的油脂。
PG-SSV分配阀在设计时，避免采用易于损坏的非金属密封结构；
精巧的滑阀结构、耐高压的端面密封结构（金属接触密封），可以满
足高温、高寒等工况的应用需求。



The PG-SSV distributor is a piston valve that supplies a fixed quantity of grease each time. By blocking an outlet, it can be supplied
to the following outlet, so that the next outlet grease quantity can be doubled and the different demands can be achieved.
A major feature of the PG-SSV distributor is each outlet is progressive, and the latter outlet must wait until the former outlet
releases grease. Based on that, the working condition of the distributor can be checked by adding visualized monitors or electron-
ic monitors. Each distributor has 6-24 (all even numbers) outlets and is able to deliver grease up to NLGI 2# or grease with a
viscosity greater than 40cSt.
The PG-SSV distributor is made of non-fragile and non-metallic sealing materials. Its exquisite sliding valve and high pressure-re-
sistant end sealing structure (metal contact seal) make it able to withstand high temperature, high cold, and other harsh working
conditions.

技术参数 Technical Parameters

出口数 Number of outlets	6-24口 6-24 outlets
最大工作压力 Maximum working pressure	350bar
出口间最大压差 Maximum pressure difference between outlets	100bar
每出口排量 Displacement of each outlet	0.2cc
进口螺纹规格 Inlet thread	G1/8” 内螺纹 G1/8” inner thread
出口螺纹规格 Outlet thread	M10x1（需配置出口单向阀） M10x1（Need to be equipped with an outlet one-way valve.）
材料 Material	碳钢，镀锌镍合金 Carbon steel, galvanized nickel alloy
工作温度 Working temperature	-40℃ ～ +80℃

PG-SSVL分配阀
PG-SSVL Distributor

PG-SSVL分配阀是一种递进式分配阀, 后一个出口必须等到前一个出口出脂后才能出脂, 根据这一特点可以通过增加目视化装置或者电子监控装置判定分配阀工作状态。PG-SSVL分配阀是为了适用复杂递进式润滑系统而设计, 出入口空间更大, 可以灵活安装多种型号的管路; 分配阀出口数为6-14 (均为偶数), 可以使用最高NLGI 2#及其以下的油脂, 或黏度大于40cSt的油脂。

PG-SSVL分配阀在设计时, 避免采用易于损坏的非金属密封结构; 精巧的滑阀结构、耐高压的端面密封结构 (金属接触密封), 可以满足高温、高寒等工况的应用需求。



The PG-SSV distributor is a progressive distributor valve, the last outlet must wait until the previous outlet before the grease can be discharged. According to this feature, the working state of the distributing valve can be determined by adding a visual device or an electronic monitoring device. The PG-SSV distributor is designed for complex progressive lubrication systems with larger inlet and outlet space and flexible installation of multiple types of pipelines; Each distributor has 6-14 (all even numbers) outlets and is able to deliver grease up to NLGI 2# or grease with a viscosity greater than 40cSt.

The PG-SSVL distributor is made of non-fragile and non-metallic sealing materials. Its exquisite sliding valve and high pressure-resistant end sealing structure (metal contact seal) make it able to withstand high temperature, high cold, and other harsh working conditions.

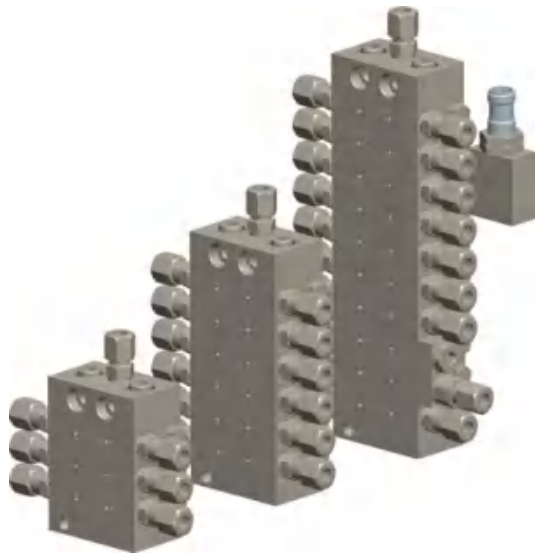
技术参数 Technical Parameters

出口数 Number of outlets	6-14口 6-14 outlets
最大工作压力 Maximum working pressure	350bar
出口间最大压差 Maximum pressure difference between outlets	100bar
每出口排量 Displacement of each outlet	0.2cc
进口螺纹规格 Inlet thread	G1/4” 内螺纹 G1/4” inner thread
出口螺纹规格 Outlet thread	M10x1 (需配置出口单向阀) M10x1 (Need to be equipped with an outlet one-way valve.)
材料 Material	碳钢, 镀锌镍合金 Carbon steel, galvanized nickel alloy
工作温度 Working temperature	-40℃ ~ +80℃

PGMD-1000分配阀
PGMD-1000 Distributor

PGMD-1000分配阀采用模块化设计, 通用化程度高, 易于安装和维护, 并带有循环指示器等特点。根据实际使用情况, 一组分配器可选择不同组合的碟片数量 (中间块最少为2片, 最多为11片; 末端块为1片), 可相应选择向最多不超过24点的润滑点供油。

The PGMD-1000 distributor adopts a modular design with a high degree of generalization. It is easy to be installed and maintained; there is also a cycle indicator. Blocks can be combined based on the actual usage to form different distributors (the middle module needs at least 2 blocks and at most 11 pieces; the end module has one block). The PGMD-1000 distributor can deliver lubricant to up to 24 points.



技术参数 Technical Parameters

出口数 Number of outlets	6-24口 6-24 outlets
最大工作压力 Maximum working pressure	350bar
出口间最大压差 Maximum pressure difference between outlets	100bar
每出口排量 Displacement of each outlet	0.025cc/0.045c/0.075cc/0.105cc
进口螺纹规格 Inlet thread	G1/8” 内螺纹 G1/8” inner thread
出口螺纹规格 Outlet thread	M10x1 (需配置出口单向阀) M10x1 (Need to be equipped with an outlet one-way valve.)
材料 Material	碳钢, 镀锌镍合金 Carbon steel, galvanized nickel alloy
工作温度 Working temperature	-40℃ ~ +80℃

PG-SL-P单线注油器
PG-SL-P Single-line Injector



盘古PG-SL-P分配阀是专为高压单线润滑系统设计的, 采用有模块化设计, 结构紧凑, 便于安装。
各出口出油量灵活可选, 每组润滑点工作相互独立, 个别注油点故障不会
影响其他注油点的正常工作, 大大提高了系统的可靠性, 延长了系统的维
护周期, 对于要求高可靠性和难以维护的设备特别适用。

The Paguld PG-SL-P metering device is designed for use in high-pressure single-line lubrication systems , Modular design, compact structure, easy to install.
Each oil output is flexible and optional, each group of lubrication points work independently of each other, and the failure of individual oil points will not affect the normal work of other oil points, greatly improving the reliability of the system, extending the maintenance cycle of the system, especially for equipment requiring high reliability and difficult to maintain.

技术参数 Technical Parameters

出口数 Number of outlets	2-14口 2-14 outlets
最大工作压力 Maximum working pressure	350bar
每出口排量 Displacement of each outlet	0.1-0.7cc/循环（可选） 0.1-0.7cc/ cycle (optional)
进口螺纹规格 Inlet thread	G 1/4 内螺纹 G 1/4 inner thread
出口螺纹规格 Outlet thread	M10*1内螺纹 M10*1 inner thread
材料 Material	碳钢, 镀锌镍合金 Carbon steel, galvanized nickel alloy
工作温度 Working temperature	-40℃ ～ +80℃

电动补脂工具
Electric Grease Flling Tool

TP-05/TP-16电动加脂泵是以电源作为动力的加脂设备, 借助直流无刷电机转动进而带动泵内柱塞运行, 将润滑脂高压泵送出去。其特点是安全可靠, 泵送排量大, 操作简单; 可加注NLGI 3#及其以下油脂。

TheTP-05/ TP-16 grease filling pump is driven by electric power. With the help of the DC brushless motor, it rotates to drive the plunger in the pump and transports the grease out with high pressure. It is characterized by high safety and reliability, large displacement, and simple operation; it can deliver grease up to NLGI 3#.



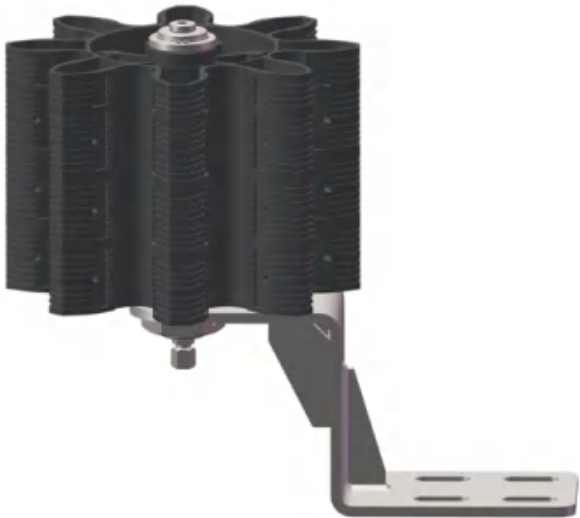
技术参数 Technical Parameters

工作电压 Operating voltage	24VDC/220VAC
电机功率 Motor power	500W
适用油桶 Grease barrels	5kg/15-20Kg标准油桶 5kg/15-20Kg standard barrel
出脂口规格 Outlet of grease specification	G1/4 inner thread
工作温度 Working temperature	-25℃ ～ +80℃
防护等级 Protection class	IP54
减速比 Reduction ratio	8:1/20:1
最大排量 Maximum displacement	1.2L/分钟@泵芯x6 0.48L/分钟@泵芯x3 1.2L/minute@pump element *6 0.48L/minute@pump element *3

润滑齿轮
Lubricating Pinion

齿轮模块化设计,采用叠片式拼装结构,使得齿轮宽度灵活可选;齿轮通过内部结构实现定方向出脂,通过合理安装就可以实现润滑齿轮持续针对与之啮合面润滑,有效防止润滑脂的滴落,增加润滑效果。

Gear modular design, using laminated assembly structure, making the gear width flexible and optional; Gear through the internal structure to achieve the direction of grease, through reasonable installation can achieve continuous lubrication of the lubricating gear against the meshing surface, effectively prevent the grease dripping, increase the lubrication effect.



技术参数 Technical Parameters

齿轮模数 Module	12/14/16/18/20/22/24/25
齿轮宽度 Gear width	40mm-240mm（20整数倍即可） 40mm-240mm（Integer multiple of 20）
压力角 Pressure angle	20°
变位系数 Modification coefficient	0
齿数 Number of teeth	8
齿顶高系数 Addendum coefficient	1
工作温度 Working temperature	-40℃～+80℃

集油瓶
Grease Collection Bottle

集油瓶主要用于轴承内废旧油脂的收集,根据安装接口和安装空间有多种类型和规格可选;活塞式集油瓶大大增加了废油脂集中收集的便利性,避免环境污染。

The Grease Collection Bottle is mainly used for the collection of waste grease in the bearing, and there are many types and specifications to choose according to the installation interface and installation space; Piston type grease collecting bottle greatly increases the convenience of waste grease collection and avoids environmental pollution.



技术参数 Technical Parameters

螺纹规格 thread specification	M10*1/M12*1.5/M14*1.5/M16*1.5/M18*1.5/M22
集油瓶容积 volume	250mL/300mL/500mL900mL/1000mL
集油瓶材质 Material	PE
气压平衡方式 Barometric balance	活塞式、透气套 Piston、Vent valve

PG-LC24智能控制器
PG-LC24 Intelligent Controller

PG-LC24智能控制器可以保证润滑系统能够得到有效控制，配有视觉和听觉故障通知。该控制器配置数码管显示，可以目视化识别润滑系统运行状态和设定参数，快速有效的解决润滑系统问题。

该控制器可广泛适用于递进式、单线式和双线式润滑系统中。

The PG-LC24 intelligent controller can guarantee that the lubrication system is effectively controlled and provided with visual and auditory failure notifications. It is equipped with a digital display, which can visually identify the operating status and be used to set parameters, so as to quickly and effectively solve problems.

This controller is suitable for progressive, single-line, and double-line lubrication systems.



技术参数 Technical Parameters

工作电压 Working voltage	10-30VDC
工作温度 Working temperature	-15℃ ~ +50℃
最大输出电流 Maximum output current	7A
报警信号最大输出电流 Maximum output current of alarm signal	3A
过载保护 Overload protection	具备过载保护 Available
防护等级 Protection class	IP54
通讯接口 Communication interface	RS232/RS485

附件产品
Fitting and Accessories



油管接头
Hose Fitting



卡套类接头
Fitting



管夹
Pipe Clamp



单密封类快插接头
Single Seal Type Quick Plug Fitting



双密封类快插接头
Double Seal Type Quick Plug Fitting



回油装置
Grease Return Device



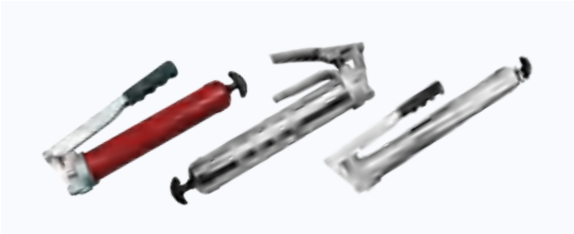
钢丝防护套
Steel Wire Protective Sleeve

螺旋防护套
Screw Sleeve

波纹管
Corrugated Pipe



油管和尼龙管
Hose



手动黄油枪
Manual Grease Guns



润滑泵芯
Pump Element



安全阀
Safety Valve



滤脂器
Grease Filter

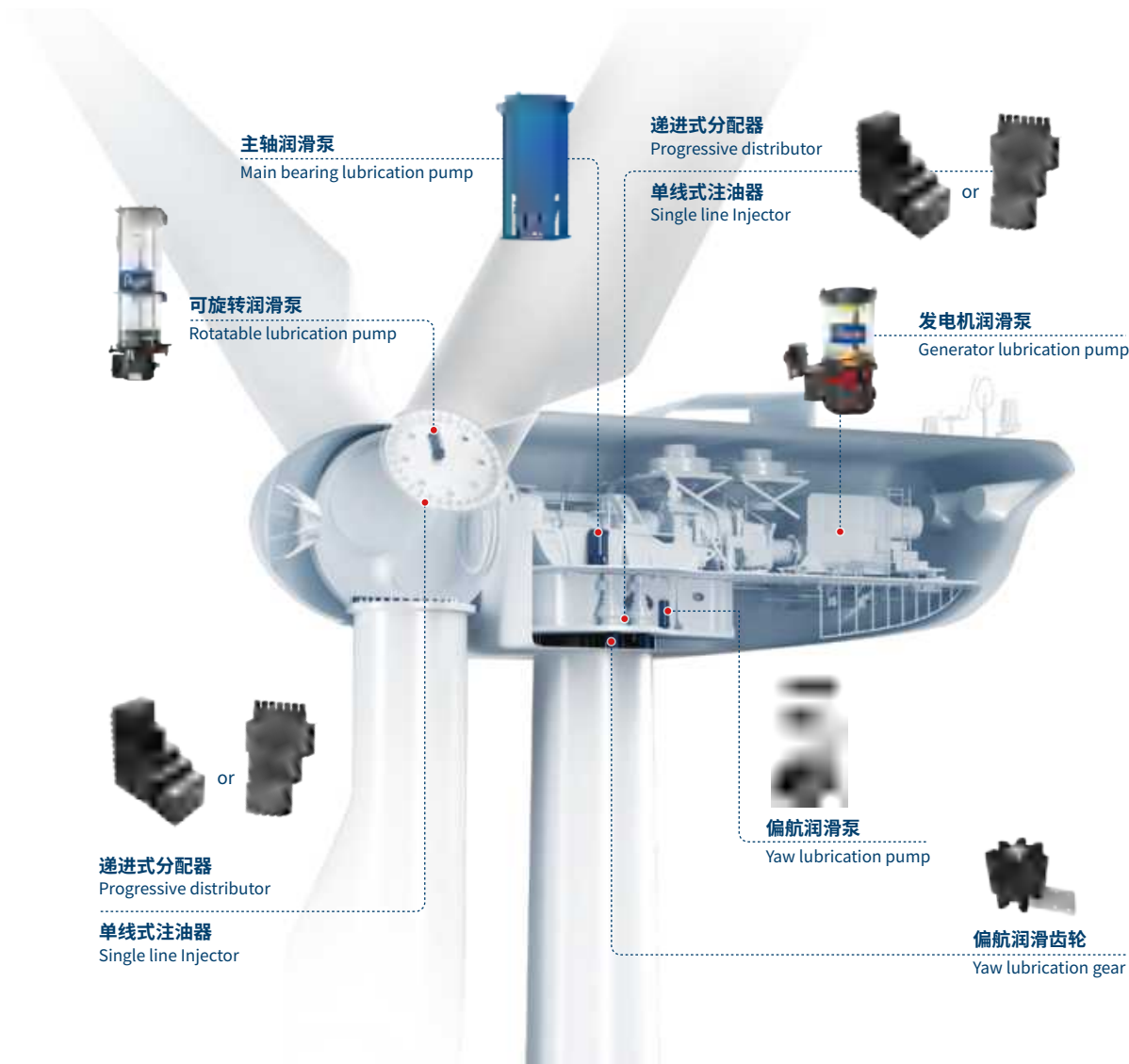
Paguld集中润滑系统在风机上的应用 Lubrication System Application in Wind Turbine

无论风机如何设计, 其轴承和齿轮务必做到合理润滑, 正确的集中润滑系统可以简化服务任务, 延长系统维护的周期间隔, 在各种不同的气候条件下都能保护设备。昂贵的、计划外的维修和停机得以避免, 而且延长了风机的寿命。研究表明, 润滑系统的成本一年就可以收回。

No matter how the wind turbine is designed, its bearings and gears must be properly lubricated. The correct centralized lubrication system can simplify service tasks, prolong the cycle interval of system maintenance, and protect the equipment in a variety of weather conditions. Costly, unplanned repairs and downtime are avoided and the life of the fan is extended. Studies have shown that the cost of lubrication systems can be recouped in a year.

应用位置	润滑系统
变桨系统轴承和齿轮	递进式润滑系统\单线润滑系统\润滑小齿
偏航系统轴承和齿轮	递进式润滑系统\单线润滑系统\润滑小齿
主轴承系统	递进式润滑系统\单线润滑系统
发电机系统轴承	递进式润滑系统\单线润滑系统

Application position	Lubrication system
Bearing and gear of pitch system	Progressive lubrication system/single line lubrication system/lubrication pinion
Bearing and gear of yaw system	Progressive lubrication system/single line lubrication system/lubrication pinion
Main bearing system	Progressive lubrication system/single line lubrication system
Generator bearing system	Progressive lubrication system/single line lubrication system



Vestas

主要应用机型
Main application models

2MW/3MW/4MW/MK3E
Vidar 5MW/BM 15MW



主要应用机型
Main application models

2.5-132/3.X/5.3MW/海上
2.5-132/3.X/5.3MW/Offshore



SIEMENS Gamesa
RENEWABLE ENERGY

主要应用机型
Main application models

西门子:4MW海上
Siemens:4MW

歌美飒:D3/G132/G145
SGRE:D3/G132/G145



主要应用机型
Main application models

2A/2B/2C/2DMW
2A/2B/2C/2DMW

2.XMW自动润滑系统系统
2.X MW Automatic Lubrication

3B/3C/4A/4E海上/5A/5E海上
3B/3C/4A/4E off-shore/5A/5E off-shore

4.0MW风电机组安装现场
4.0MW Wind Turbine Installation Site

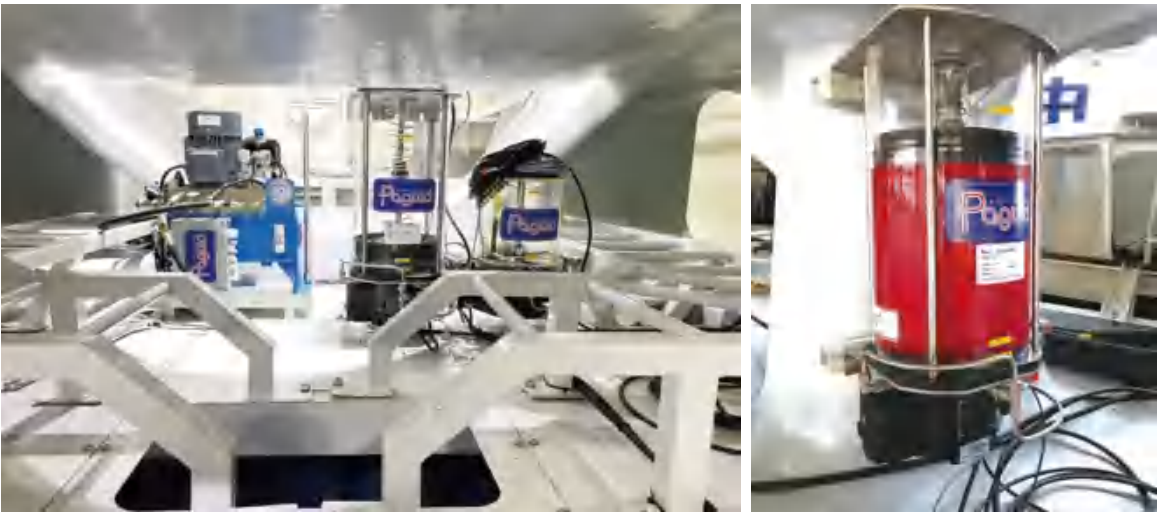


Goldwind
金风科技

主要应用机型
Main application models

2.0MW/2.5MW/2.XMW/3.X/4.5MW/6或
8MW海上润滑系统

2.0MW/2.5MW/2.XMW/3.X/4.5MW/6 or
8MW Off-shore lubrication system

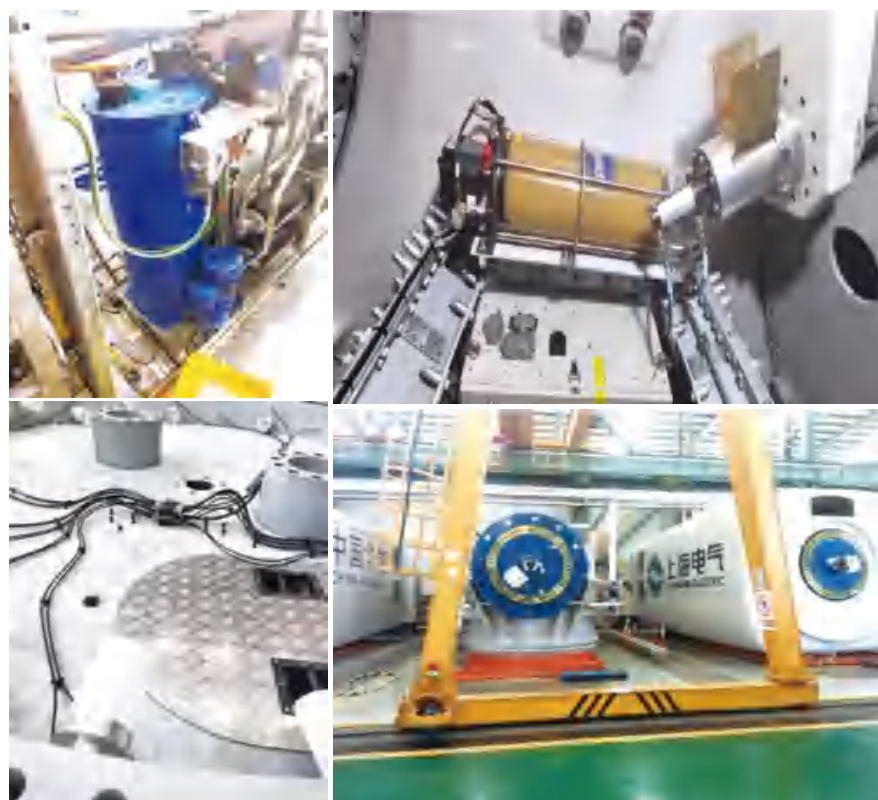


主要应用机型
Main application models

3.XMW-8MW全系列润滑系统和液压站
3.XMW-8MW full series of lubrication systems and hydraulic stations

CSSC 中国海装

成为世界一流的润滑与液压系统制造商
To be the world-class lubrication, hydraulic system manufacturer and solution provider



主要应用机型
Main application models

2.X/3.X/4.XMW Pitch Lock
6.25MW/7MW offshore



主要应用机型
Main application models

直驱Direct Drive:
2.5MW/3.2MW/4.5MW/5MW/
7MW/8MW/10MW

双馈Double-fed:
2.0MW/3.6MW

盘古，是民族的，更是世界的

Paguld For Nation and World

穹顶之下，未来已来。

青岛盘古智能制造股份有限公司始终以客户需求为核心，以创新为驱动力，做精做强，努力成为世界一流的润滑与液压系统制造商！

Under the dome, the future is here.

Qingdao Paguld Intelligent Manufacturing Co., Ltd. always takes customer demand as the core, takes innovation as the driving force, makes fine and strong, and strives to become the world-class lubrication and hydraulic system manufacturer!