



宝腾智能润滑技术(东莞)有限公司

BAOTN INTELLIGENT LUBRICATION TECHNOLOGY (DONGGUAN) CO.,LTD.

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15315550551 易先生(Mr. Yi)

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<http://baotn.com.cn/> (中文网站)

<https://www.baotn.com/> (English Website)

全国服务热线: 400-880-8722

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Note: The words, designs and technical parameters are subject to change along with the development of technologies without prior notice.



企业官网



微信公众号



抖音二维码

代理商(Distributor):

BAOTN

宝腾智能润滑技术(东莞)有限公司

BAOTN INTELLIGENT LUBRICATION TECHNOLOGY (DONGGUAN) CO., LTD.

集中润滑系统



始于2006年

集中润滑系统

INTEGRATED LUBRICATION SYSTEM 2026 Version



专注减摩增效, 成就客户核心竞争力

Focus on friction reducing and efficiency increasing, and achieve the core competitiveness of customers.

宝腾智能润滑技术(东莞)有限公司
BAOTN INTELLIGENT LUBRICATION TECHNOLOGY (DONGGUAN) CO., LTD.



润滑系统专业智造商

Professional Lubrication System Intelligent Manufacturer



- ▲ 企业愿景：成为提供一流润滑系统和服务的公司！
- ▲ 企业使命：专注减摩增效，成就客户核心竞争力！
- ▲ 核心价值观：客户、创新、诚信、拼搏、自律、共赢！
- ▲ 管理理念：沟通、协作、高效、目标！
- ▲ 质量方针：质量第一、持续改进、全员参与、客户满意！

- ▲ Enterprise vision: To be a company that provides first-class lubrication system equipments and services!
- ▲ Enterprise mission: Focus on friction reducing and efficiency increasing, and achieve the core competitiveness of customers!
- ▲ Core values: Customer, Innovation, Integrity, Hard Work, Self-discipline, Win-win!
- ▲ Management philosophy: Communication, Collaboration, Efficiency, Target!
- ▲ Quality policy: Quality first, continuous improvement, full participation, customer satisfaction!

COMPANY PROFILE

公司简介



BAOTN Intelligent Lubrication Technology (Dongguan) Co., Ltd. is a high-tech enterprise dedicated to intelligent lubrication systems, located in the beautiful and dynamic Songshan Lake, Dongguan, China.

Since its establishment in 2006, BAOTN Lubrication has been actively practicing its corporate vision of 'becoming a first-class lubrication system and service provider', and has established an extensive service network around the world to meet the needs of global customers. The company's products include thin oil lubrication system, grease lubrication system, oil-air lubrication system and oil mist lubrication system, etc. The products are used in the fields of CNC machine tools, automation, textile, engineering machinery, metallurgy, wind power generation and heavy industry.

BAOTN Intelligent Lubrication adheres to the talent and technology as the basis for continuous investment in R&D technology, the introduction of PLM R&D management system, the establishment of the "Tribology Intelligent Lubrication Laboratory" for the product development process to provide a comprehensive test verification.

Under the guidance of the quality policy of "Quality First, Continuous Improvement, Full Participation, Customer Satisfaction", we have introduced ISO9001 quality management system, IATF16949 quality management system, ERP system, digitalized on-site signage system, and set up automated precision manufacturing centers to realize intelligent, automated and digitalized production system.

The company has won a number of honors such as high-tech enterprises, innovative small and medium-sized enterprises, specialized and special new small and medium-sized enterprises, synergistic multiplying enterprises, group standard-setting unit of grease lubrication system in China's construction machinery industry, Baoteng Engineering Technology Research Center of Intelligent Lubrication Equipment and other honors, and its R&D products have won a number of patents for invention and utility model patents.

BAOTN Intelligent Lubrication, focusing on reducing friction and increasing efficiency, and accomplishing customers' core competitiveness.



宝腾智能润滑技术（东莞）有限公司是一家致力于智能润滑系统的高新技术企业，坐落于美丽且充满活力的中国东莞松山湖科学城。

宝腾智能润滑自2006年成立以来积极践行企业愿景“成为提供一流润滑系统和服务的公司”，在全球各地建立了广泛的服务网络以满足全球客户需求。公司产品包括稀油润滑系统、油脂润滑系统、油气润滑系统以及油雾润滑系统等，产品应用涉及领域包含数控机床、自动化、纺织、工程机械、冶金、风力发电和重工等行业。

宝腾智能润滑坚持以人才和技术为基础不断投入研发技术力量，引入PLM研发管理系统，建立“摩擦学智能润滑实验室”为产品开发过程提供全面测试验证。

在“质量第一、持续改进、全员参与、客户满意”的质量方针指引下导入ISO9001质量管理体系、IATF16949质量管理体系并导入ERP系统、数字化现场看板系统，建立自动化精密制造中心，实现智能化、自动化、数字化生产体系。

公司荣获高新技术企业、创新型中小企业、专精特新中小企业、协同倍增企业、中国工程机械行业油脂润滑系统团体标准制定单位、智能润滑设备宝腾工程技术研究中心等多项荣誉，研发产品获得多项发明专利及实用新型专利。

宝腾智能润滑，专注减摩增效、成就客户核心竞争力。



DEVELOPMENT PROCESS

发展历程

2006

成立东莞市长安宝腾机械五金店，与润滑系统生产厂家合作，专业销售机械润滑系统。
Establish Dongguan Chang'an Baoteng Machinery Hardware Store, cooperate with lubrication system manufacturers, and specialize in selling mechanical lubrication systems.

2007

注册BAOTN商标，并成立研发中心，专注研发集中润滑系统(BAOTN商标)。
Register the BAOTN trademark and establish a research and development center, focusing on the development of centralized lubrication systems (BAOTN trademark)



2009

建立首个生产基地“BAOTN”系列产品正式投产。(大岭山生产基地)
The first production base "BAOTN" series products have been officially put into operation. (Dalingshan Production Base)



2010

成立北方润滑解决方案中心——天津(天津办公)注册中文“宝腾”商标。
Establishment of Northern Lubrication Solution Center – Tianjin (Tianjin Office) Register the Chinese trademark "Baoteng".



2014

成立华东润滑解决方案中心——苏州(昆山办公地)。
Establishment of East China Lubrication Solution Center – Suzhou. (Kunshan office)



2016

成立济南服务处，通过ISO9001体系认证。
Establish Jinan Service Office and obtain ISO9001 system certification.



2018

获评国家高新技术企业。(企业认证牌)
Awarded as a national high-tech enterprise. (Enterprise Certification Plate)



2020

总部迁址中国松山湖科学城，成立宝腾智能润滑技术(东莞)有限公司大岭山分公司。
Headquarters relocated to Songshan Lake Science City in China, and Baoteng Intelligent Lubrication Technology (Dongguan) Co., Ltd. Dalingshan Branch was established.



2021

成立宝腾智能润滑科技南京有限公司。
Establishment of Baoteng Intelligent Lubrication Technology Nanjing Co., Ltd.



2022

成立摩擦学智能润滑实验室 获评东莞市工程技术研究中心 获评东莞市协同倍增企业
Establish an intelligent lubrication laboratory for tribology Awarded dongguan engineering technology research center Awarded dongguan collaborative doubling enterprise



2023

通过IATF16949体系认证 获评广东省工程技术研究中心 专精特新中小企业 创新型中小企业
Passed IATF16949 system certification Awarded guangdong engineering technology research center Specialized and innovative small and medium-sized enterprises Innovative small and medium-sized enterprises



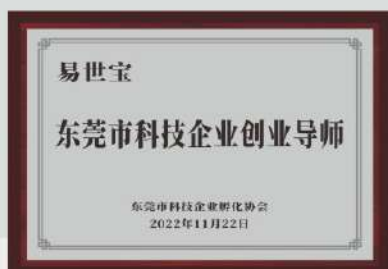
2024

通过ISO14001环境管理体系认证 获得多项国际专利 成为中国机械工程学会摩擦学分会委员单位
Certified with ISO14001 environmental management system Obtained multiple international patents Becoming a member unit of the friction and friction branch of the chinese society of mechanical engineering



ENTERPRISE QUALIFICATION

企业资质



INTELLECTUAL PROPERTY

知识产权

国际型专利证书
International Patent Certificate



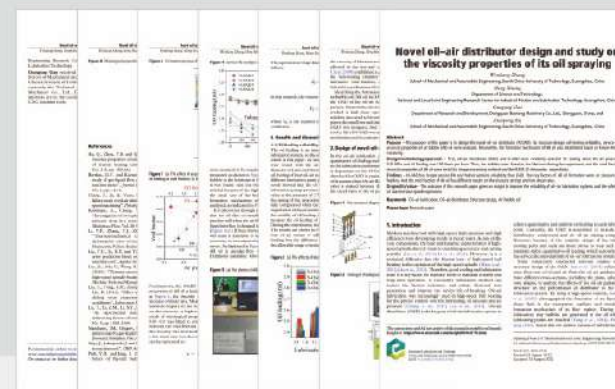
发明专利证书
Invention Patent Certificate



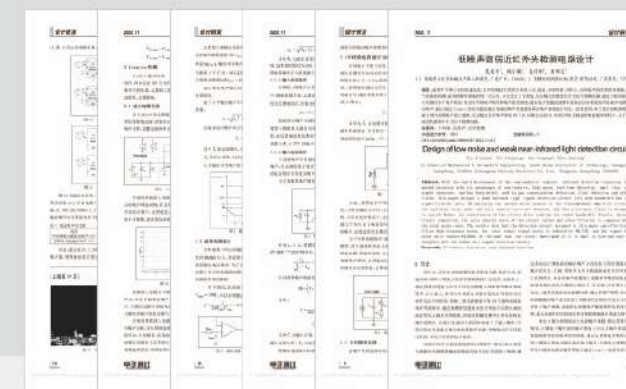
实用新型专利证书
Utility model patent certificate



Novel oil-air distributor design and study on the viscosity properties of its oil spraying



低噪声微弱近红外光检测电路设计
Design of Low Noise Weak Near Infrared Light Detection Circuit



Transient formation theory of air-microbubble oil and testing its oil-spraying mechanism



油气润滑系统混合器设计及内部流场仿真分析
Design of Mixer for Oil Gas Lubrication System and Simulation Analysis of Internal Flow Field



SCHOOL ENTERPRISE COOPERATION

校企合作

公司长期与国内名牌高校进行产学研合作，从产品规划、设计实现、应用验证等方面对研发的产品进行全方位部署和规划。公司已与双一流名校华南理工大学开展了多年合作。以谢小鹏教授为首的摩擦学团队，包含了教授、博士、硕士等摩擦学领域的优秀研究人员，与公司经过了五年的合作与交流，成功开发了油气润滑系统、油气末端检测传感器、分配器等产品。采用理论计算、仿真分析、实验测试等相结合的方法对产品的稳定性和可靠性进行了稳固提升。

同时，公司培养了1名博士，4名硕士。黄恒博士也被引进正式加入公司，助力公司产业发展。在此期间，申请了多项发明和实用新型专利，并在国内外知名杂志发表了多篇高水平论文。多年的产学研合作经验，极大促进了公司在行业领域的发展，并为公司在未来的发展部署提供技术支持。

Baotn has long-term industry-university-research cooperation with domestic famous universities, and conducts all-round deployment and planning of the developed products from product planning, design realization, application verification and other aspects. The company has cooperated with South China University of Technology, a double first-class school, for many years. The tribology team headed by Professor Xie Xiaopeng includes professors, doctors, masters and other outstanding researchers in the field of tribology. After five years of cooperation and exchanges with the company, the oil-air lubrication system, oil-air end detection sensor, distributor and other products have been successfully developed. The stability and reliability of the product have been steadily improved by combining theoretical calculation, simulation analysis, and experimental testing.

At the same time, the company assisted in the training of one doctor and four masters. Dr. Huang Heng was also introduced to officially join the company to help the company's industrial development. During this period, multiple invention and utility model patents were applied for, and multiple high-level papers were published in well-known domestic and foreign magazines. Years of industry-university-research cooperation experience have greatly promoted the company's development in the industry and provided technical support for the company's future development and deployment.



专家团队主要成员介绍 Introduction to the main members of the expert team



谢小鹏 | 华南理工大学教授、博士生导师

华南理工大学机械与汽车工程学院教授、博士生导师，汽车摩擦学与故障诊断研究所所长，广东省内燃机学会会长。主持了多项国家自然科学基金、广东省自然科学基金、广东省科技厅等项目。从教期间培养了博士、硕士近百人，培养的学生遍布了机械及相关各领域。获国家级教学成果二等奖1项、省级教学成果一等奖1项；获得市级科技进步奖1项。主编专著5部，授权发明专利20余件，实用新型专利近百件。发表学术论文200余篇，其中SCI论文40余篇。在摩擦学理论，润滑系统设计有着丰富的理论基础和实践经验。

Professor and doctoral supervisor of the College of Mechanical and Automotive Engineering in South China University of Technology. Director of the Institute of Automotive Tribology and Fault Diagnosis, and President of the Guangdong Internal Combustion Engine Society. Led multiple projects such as the National Natural Science Foundation of China, Guangdong Provincial Natural Science Foundation of China, and Guangdong Provincial Science and Technology Bureau. During teaching period, he trained nearly a hundred doctoral and master's students, covering various fields such as machinery and related fields. Received 1 second prize for national level teaching achievements and 1 first prize for provincial level teaching achievements. Received 1 municipal level scientific and technological progress award. The editor in chief has 5 monographs, authorized over 20 invention patents, and nearly 100 utility model patents. Published over 200 academic papers, including over 40 SCI papers, he has a rich theoretical foundation and practical experience in the theory of tribology, lubrication system design.



苏峰华 | 华南理工大学教授、博士生导师

华南理工大学教授、博士生导师。先后主持国家自然科学基金、装备预研快速扶持项目、国防领域基金173项目、广东省自然科学基金杰出青年基金、广东省自然科学基金重点和面上项目等国家和省部级课题近20项，获广东省自然科学二等奖1项，2022-2024连续入围美国斯坦福大学发布的全球前2%顶尖科学家-终生科学影响力榜单和年度榜单。在国际权威期刊发表SCI收录论文100余篇，授权发明专利20余件。担任中国机械工程学会摩擦学分会委员、中国机械工程学会表面工程分会委员、广东省真空学会副理事长、广东省机械工程学会摩擦学分会及表面处理工程分会副理事长；是国家重点研发计划、国家自然科学基金、广东省科技计划项目等各级项目和科技奖励的评审专家。

Professor and Doctoral Supervisor at South China University of Technology. He has led nearly 20 national and provincial-level research projects, including the National Natural Science Foundation of China, the Equipment Pre-research Rapid Support Project, the National Defense Field Fund 173 Project, the Guangdong Provincial Natural Science Outstanding Young Scientist Fund, and the Guangdong Provincial Natural Science Foundation Key and General Projects. He has received one Second Prize in the Guangdong Provincial Natural Science Awards and has been listed on the Stanford University-published Global Top 2% Scientists - Lifetime Scientific Influence List and Annual List from 2022 to 2024. He has published over 100 SCI-indexed papers in international authoritative journals and holds over 20 authorized invention patents. He serves as a committee member of the Tribology Branch of the Chinese Society of Mechanical Engineering, a committee member of the Surface Engineering Branch of the Chinese Society of Mechanical Engineering, Vice President of the Guangdong Vacuum Society, and Vice President of both the Tribology Branch and Surface Treatment Engineering Branch of the Guangdong Society of Mechanical Engineering. He is also an expert reviewer for various projects and science and technology awards at all levels, including the National Key Research and Development Program, the National Natural Science Foundation of China, and the Guangdong Provincial Science and Technology Plan Projects.



黄恒 | 华南理工大学博士、博士后

华南理工大学博士、博士后，长期从事机械设计、摩擦学原理等相关研究工作，在机械装备润滑磨损状态监测、润滑系统智能化设计等相关领域具有丰富的理论基础及实践经验。参与了国防项目“某舰抗燃液压油液监测技术应用研究”、国家科技部项目“自主船用低速柴油机开发研究及关键技术开发”等的研究，作为主要人员参与了多项国家自然科学基金、广东省自然科学基金的研究，同时也参与了多项广东省、广州市、东莞市科技计划项目。发表论文20余篇，其中SCI收录10篇，EI收录3篇；申请专利20余项，并参与编著了行业著作一本《汽车零部件润滑脂试验研究》。

Ph.D. and postdoctoral fellow at South China University of Technology, engaged in long-term research on mechanical design, tribology principles, and other related fields. He has rich theoretical foundation and practical experience in monitoring the lubrication and wear status of mechanical equipment, intelligent design of lubrication systems, and other related fields. Participated in research projects such as the National Defense Project "Application Research of a Certain Ship's Anti Combustion Hydraulic Fluid Monitoring Technology" and the National Ministry of Science and Technology Project "Development Research and Key Technology Development of Autonomous Low Speed Diesel Engines for Ships". As the main personnel, participated in multiple research projects funded by the National Natural Science Foundation of China and the Guangdong Natural Science Foundation of China. At the same time, he participated in multiple science and technology plan projects in Guangdong Province, Guangzhou City, and Dongguan City. Published over 20 papers, including 10 included in SCI and 3 included in EI; he applied for more than 20 patents and participated in the compilation of an industry book titled "Experimental Research on Automotive Parts and Lubricants".



张文亮 | 华南理工大学博士

华南理工大学博士，主要从事摩擦学设计与应用技术，智能润滑与冷却技术、油气润滑设计先进技术等领域的研究。对高速轴承润滑理论、先进刀具及智能高效加工技术与装备等有丰富的理论基础和实践经验。发表论文10余篇，涵盖SCI、EI、中文核心等各类学术高端论文。申请专利10余件，授权油气润滑系统发明专利1件。作为主要研究人员参与了多项科研项目 and 工程项目的研究工作，并取得了显著成效。在高速电主轴油气润滑系统设计方面具有丰富的理论和实践经验。

Ph.D. from South China University of Technology, mainly engaged in research in the fields of tribological design and application technology, intelligent lubrication and cooling technology, and advanced technology in oil and gas lubrication design. I have rich theoretical foundation and practical experience in high-speed bearing lubrication theory, advanced cutting tools, and intelligent and efficient machining technology and equipment. Published over 10 papers, covering various academic high-end papers such as SCI, EI, and Chinese Core. More than 10 patents have been applied for, and 1 invention patent for oil-air lubrication system has been authorized. As the main researcher, he participated in the research work of many scientific research projects and engineering projects, and achieved remarkable results. He has rich theoretical and practical experience in the design of high-speed electric spindle oil-air lubrication system.

ORGANIZATIONAL STRUCTURE

组织架构

组织架构是公司运转的“脉络”，明晰部门与岗位分工，杜绝内耗；优化流程、调配资源，保障生产物流顺畅，助力准时出货，增强市场竞争力。

The organizational structure is the "thread" of the company's operation, clarifying the division of labor between departments and positions, and eliminating internal friction; Optimize processes, allocate resources, ensure smooth production logistics, assist in on-time shipments, and enhance market competitiveness.



BAOTN LABORATORY

实验室



我们严守行业高标准，配齐前沿尖端设备，规范操作流程，精英科研团队潜心深耕、精研突破。始终将客户置于首位，实验室精准锚定客户需求创新探索，以专业成果量身定制解决方案，与客户携手共赴双赢之约。

We strictly adhere to high industry standards, equip ourselves with cutting-edge equipment, standardize operating procedures, and have an elite research team dedicated to deep cultivation and breakthroughs. Always putting customers first, the laboratory precisely anchors customer needs for innovative exploration, tailors solutions with professional achievements, and works hand in hand with customers to achieve a win-win agreement.





自动生产线 Automatic production line



润滑泵测试区 Lubrication pump test area

MANUFACTURING CAPABILITY

制造能力

宝腾下设应用中心，营销管理中心，技术中心，运营中心，采购部，生产管理中心，人事行政部，IT部共八大现代企业职能部门，建立了质量管理、职业健康安全、环境和标准化管理体系为一体的综合管理体系，逐渐向集团模块化迈进。科学严谨的管理体系和职业化的人才队伍为宝腾运营奠定坚实基础，企业内部拥有良好的人才培育机制和激励机制，建立并实施管控中长期战略规划，致力打造优秀的宝腾企业文化。

Baotn has Application centre, Marketing Management Center, Technology center, Operation Center, Purchasing Department, Production Management Center, Personnel Administration Department, IT Department of eight modern business functions of the centres, the of quality management, occupational health and safety, end safety, environment and standardized management system for the integrated management system, gradually Group modular management forward. Scientific and strict management system and professional personnel carrier to lay a solid foundation of Baotn, the enterprise has good personnel training and incentive mechanisms to establish and implement a long-term strategic planning controls, to create excellent Baotn corporate culture.



自动生产线 Automatic production line

润滑泵包装区 Lubrication pump packing area

TEST CAPABILITY

测试能力

我们在中国东莞建立现代化的专业生产基地，通过导入信息管理系统精益生产，优化制造工艺并引进具备国际先进水平的德国激光切割机、AMADA及日本村田数控冲床等钣金加工设备厂家合作，建立了柔性的生产系统和科学的品保系统。我们依靠先进的信息化水平，方便、快速的实现订单数据精准处理，同时结合持续自我改善，不断缩短生产周期，强大的生产制造能力有力保证了为您快速的交付产品。

We established modern professional production base in Dongguan China, by importing information management system of lean production, optimize manufacturing processes and with the introduction of international advanced level of German laser cutting machine, AMADA and CNC punch press of Japan, mu rata sheet metal processing equipment manufacturers, to establish a flexible production systematic and scientific quality assurance systems. We rely on the advanced level of information to facilitate the rapid realization of orders precise handling, combined with continuous self-improvement, continue to shorten the production cycle, strong manufacturing capability strong guarantee for your quick delivery of products.



润滑泵测试 Lubrication pump test



品检测试 QC Test



品检测试 QC Test

容积式集中稀油润滑系统 Volumetric centralized thin oil lubrication system	
间歇型电动稀油润滑泵(齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)	
(BTA-A2型)数显稀油润滑泵 (BTA-A2 Type) Thin oil lubrication pump with digital display	03-04
(BTA-C2型)PLC控制稀油润滑泵 (BTA-C2 Type) PLC control thin oil lubrication pump	05-06
(BTB-A2型)数显稀油润滑泵 (BTB-A2 Type) Thin oil lubrication pump with digital display	07-08
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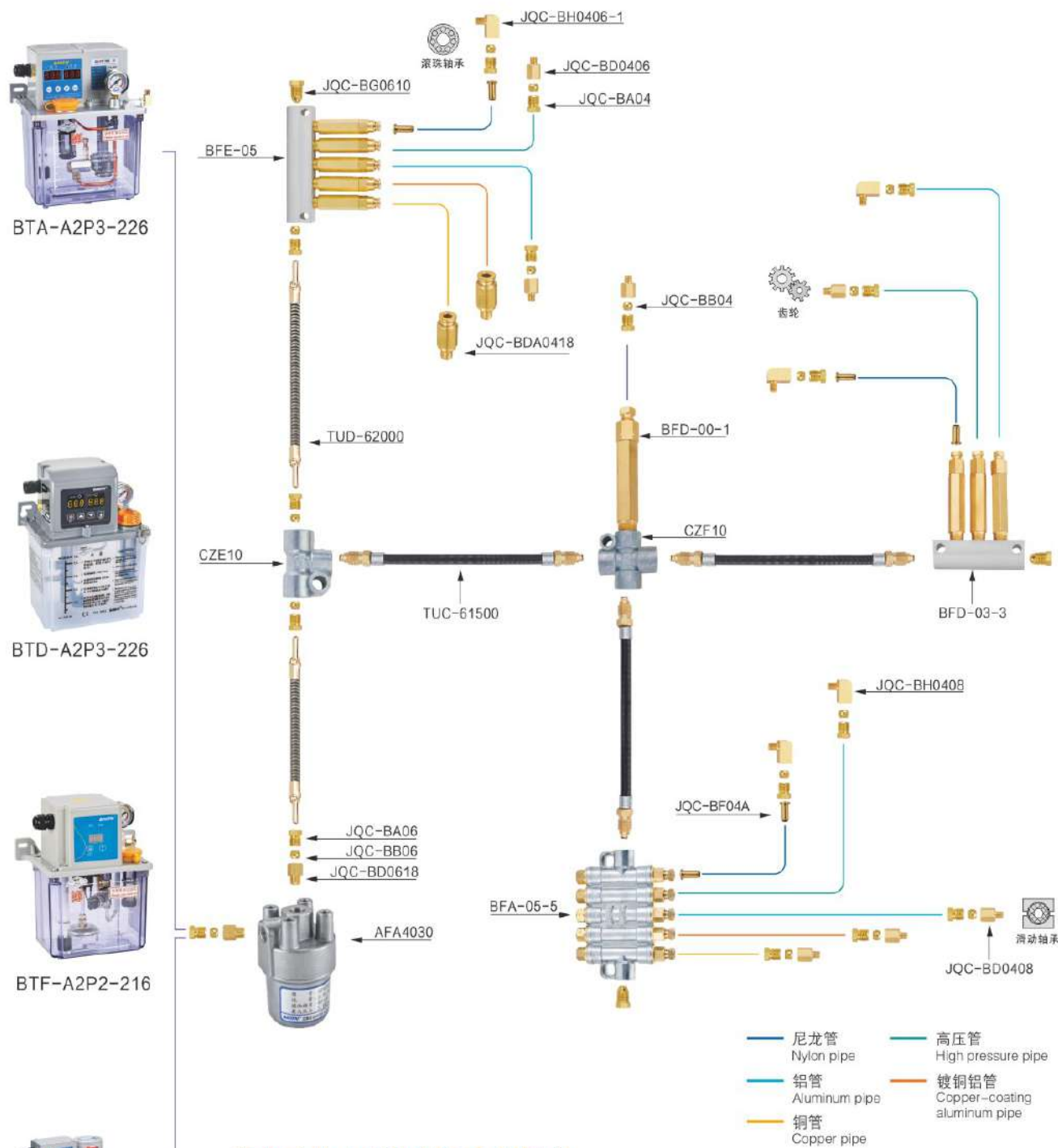
抵抗式集中稀油润滑系统 Resistance-type centralized thin oil lubrication system	
间歇型电动稀油润滑泵(齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)	
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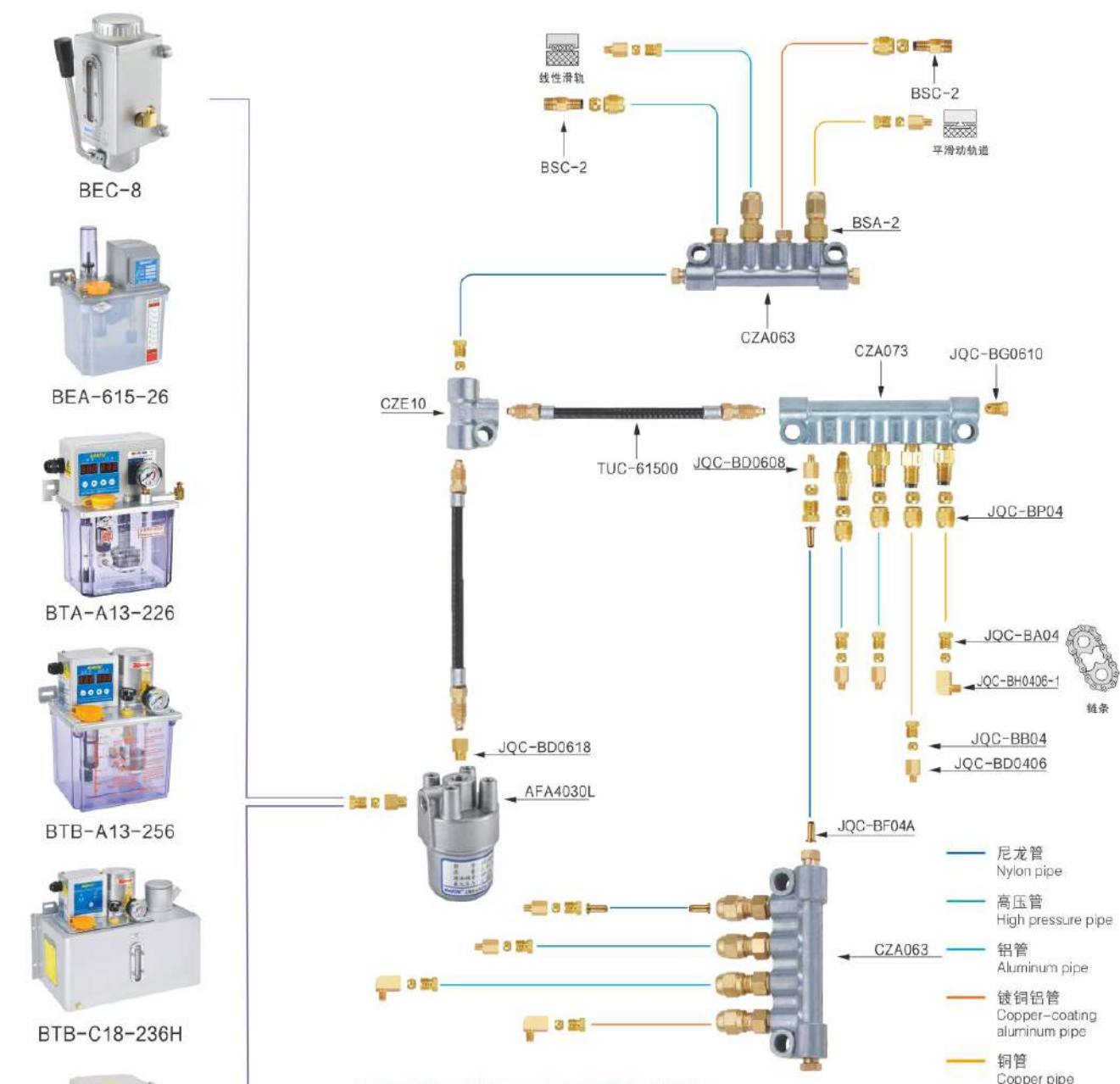
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容积式集中稀油润滑系统配管图 Volumetric centralized thin oil lubrication system piping diagram



抵抗式集中稀油润滑系统配管图 Resistance-type centralized thin oil lubrication system piping diagram

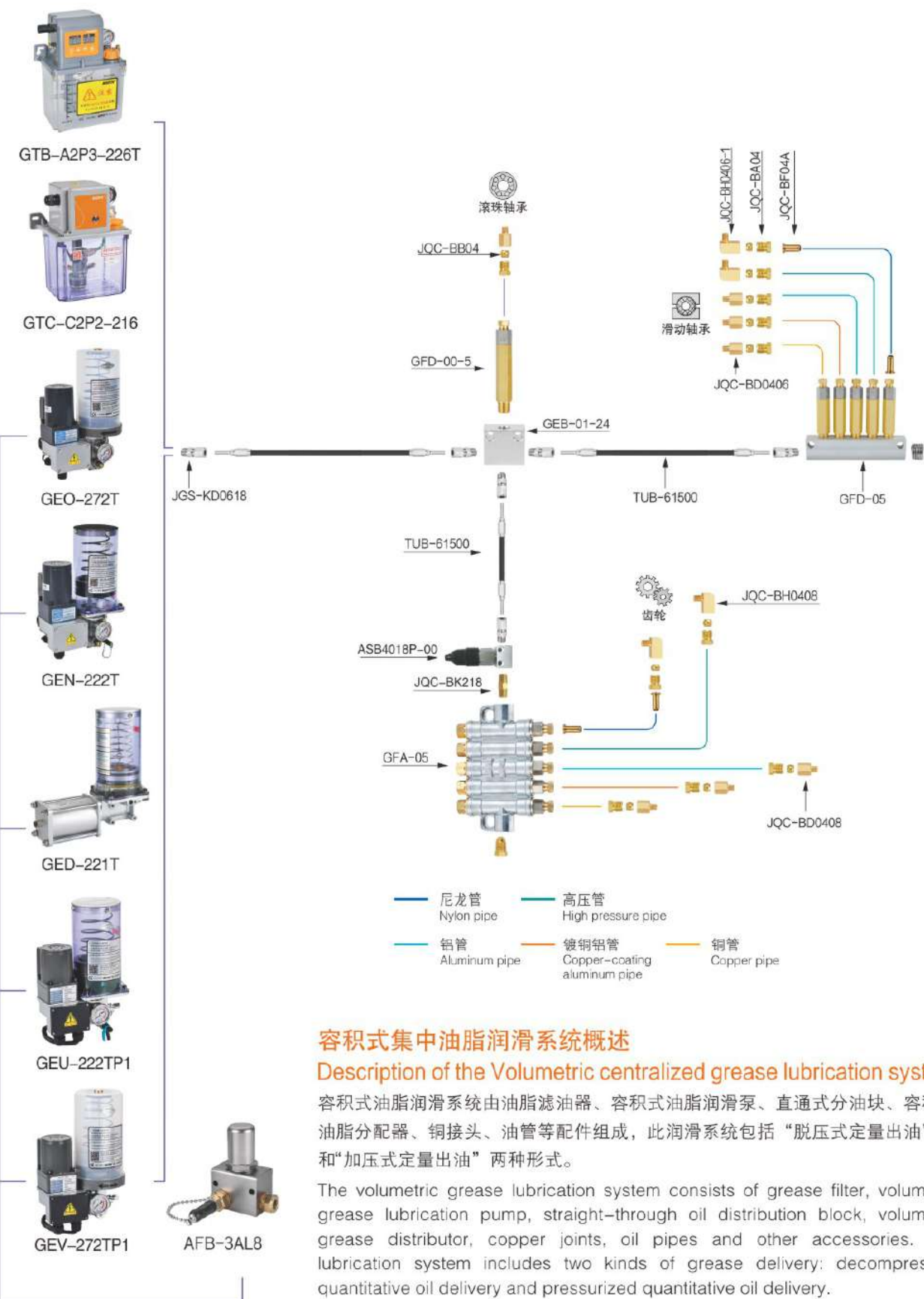


抵抗式集中稀油润滑系统概述 Description of the Resistance-type centralized thin oil lubrication system

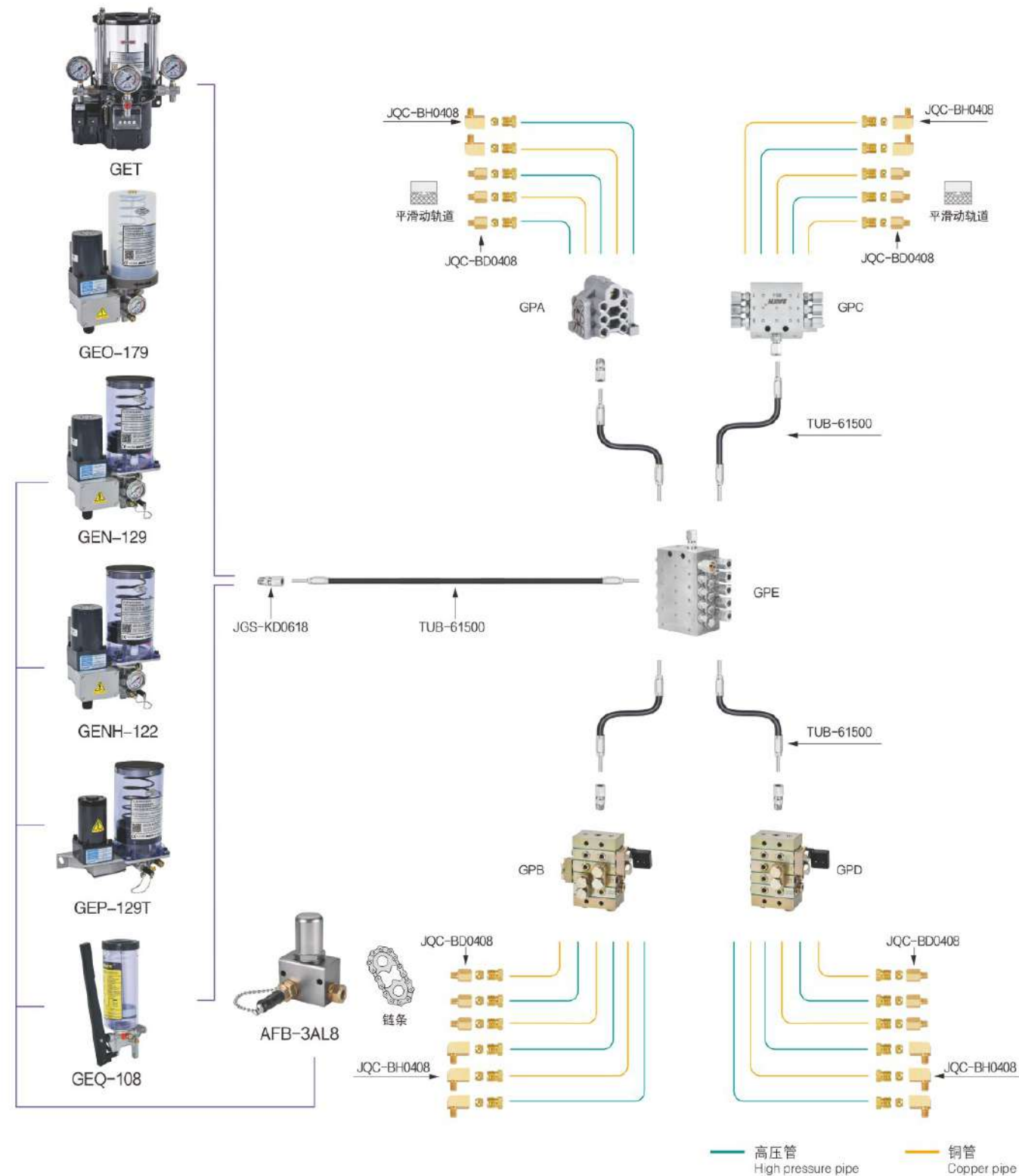
抵抗式润滑系统由抵抗式润滑泵、过滤器、BSD/BSE/BSA/CZB等直通式分油块、比例接头、铜接头、油管等组成。可按各个润滑点油量不同，选择不同规格的比例接头。有润滑泵定时定量的供应润滑油，通过比例接头控制油量对各个润滑点进行润滑，使整个系统各点的供油量与各点需油量保持平衡。

The resistant lubrication system is composed of resistant lubrication machine, filter, BSD/BSE/BSA/CZB and other straight-through oil distribution blocks, proportional joints, copper joints, oil pipes, etc. Proportional joints of different specifications can be selected according to the amount of oil required by each lubrication point. lubrication oil is supplied regularly by the lubrication machine, and lubrication points are lubricated by control the amount of oil through proportional joints, so that the oil supply at each point of the entire system and the oil demand at each point are kept in balance.

容积式集中油脂润滑系统配管图 Volumetric centralized grease lubrication system piping diagram



递进式集中油脂润滑系统配管图 Progressive centralized grease lubrication system piping diagram



Volumetric centralized thin oil lubrication system

容积式集中稀油润滑系统

容积式集中稀油润滑系统概述

Description of the volumetric centralized thin oil lubrication system

容积式润滑系统由容积式润滑泵与滤油器、直通式分油块、容积式分配器、铜接头、油管等配件组成,此润滑系统包括(脱压式定量出油)和(加压式定量出油)两种形式。

The volumetric lubrication system is composed of volumetric lubrication pump, oil filter, straight-through oil distribution block, volumetric distributor, copper joint, oil pipe and other accessories. This lubrication system includes two kinds of oil delivery: decompression quantitative oil delivery and pressurized quantitative oil delivery.

1 脱压定量出油工作原理

容积式润滑泵工作时,先将润滑油输送到(BFA/BFB型)容积式分配器中,当容积式分配器内储满油后,润滑泵停止工作,同时自动脱压,分配器内的弹簧推动内部活塞,将定量好的润滑油输送到各润滑点。

2 加压定量出油工作原理

容积式润滑泵工作时,通过输送的压力推动(BFD/BFE/BFG/BFH型)容积式分配器内部活塞,将容积式分配器内已定量好的润滑油强制性输送到各润滑点。

3 系统特点

- 每次可将润滑油精准定量地输送到各润滑点。
- 各定量孔出油量不会因油品的黏度、温度变化、供油时间长短而发生变化。
- 同规格的容积式分配器每次出油量不受安装位置的远近、高低等因素影响。
- 按需计量分配各润滑点油量,在实际使用当中,容积式系统更为节能环保,经济实用。

Operating principle of decompression quantified oil delivery

When the volumetric lubrication pump is working, the lubricant is conveyed to (models BFA/BFB) volumetric distributor. When the volumetric distributor is full of oil, the lubricant stops working and decompresses. The spring in the distributor advances internal pistons, and conveys quantified lubricant to the lubrication points.

Operating principle of pressurized quantified oil delivery

When the volumetric lubrication pump is working, the pressure is used to drive piston inside the (model BFD/BFE/BFG/BFH) volumetric distributor, and quantified lubricant in the volumetric distributor is used to convey the lubrication points.

System characteristics

- The lubricant is conveyed to lubrication points accurately.
- Oil delivery quantities of the quantified holes are not subject to viscosity, temperature and oil injection time.
- Oil delivery volume of volumetric distribution of the same specifications are not subject to installation location and height etc.
- Oil volumes of the lubrication points are measured, and the volumetric system is economical and more energy saving in practice.

4 系统配置注意事项

- 在容积式润滑系统中,每一个润滑点必须单独对应容积式分配器的每一个定量出油孔,进行直通式润滑。否则会导致管路无法聚压,使分配器无法正常储油或出油。
- 须搭配容积式润滑泵使用,严禁与抵抗式润滑泵配合使用。

Attentions for system configuration

- In the volumetric lubrication system, each lubrication system must be provided with a quantified oil outlet hole of the corresponding volumetric distributor for through lubrication; otherwise, the pipeline cannot accumulate pressure, and the distributor cannot store or convey oil.
- The system shall be used with the lubricant pump, and cannot be used with the resistant lubrication pump.

5 系统安装注意事项

- 各油路管口裁剪平整,确保连接完好不漏油,否则将导致管路有缓慢漏油卸压甚至无法聚压,使分配器无法正常储油或出油。
- 安装时保证各管路内部清洁,润滑泵和主油管路中严禁加装任何止逆装置。
- 请使用优质清洁的油品。严禁使用具有高独特性或酸碱性的油品。
- 适用温度-10~50℃。
- 注意使用环境温度变化,适当调整使用油品黏度值。

Attentions for system installation:

- Oil pipe orifices shall be cut in order to ensure that connection is integral without oil leakage; otherwise, the pipeline may leak oil and pressure cannot be accumulated, and the distributor cannot store oil or convey oil.
- When installed, interior of the pipeline shall be clean, and installing check valves in the lubrication pump and main pipeline are prohibited.
- Please use good quality clean oil. Unique, alkali or acid oil cannot be used.
- Applicable temperature -10~50°C.
- Please notice changes of environmental temperature. Properly adjust oil product variety..

6 基本适用范围

- 齿轮泵(罩极电机):适用于主油管路长度在25米,润滑点数约在50个之内的中小型机械设备中。
- 齿轮泵(感应电机):适用于主油管路长,润滑点多,需油量较大的各类机械设备中。

Basic scope of application:

- Gear pump (Shaded Pole Motor): applicable for medium and small-sized machinery and equipment with main oil pipeline length of 25 meters, lubrication points of maximum 50 points.
- Gear pump (Induction Motor): applicable for various machinery and equipment with lengthy main oil pipe and requiring large oil quantities.



注：★表示优选型号
Note: ★ indicates preferred model

订货编制说明 Order description

BTA-A2 □ □ - □ □ □ □ □ □

压力开关 Pressure switch	P	压力开关★ Pressure switch
空白 Blank		无 None

油箱容积 Oil tank volume	2	2L ★
	3	3L ★
	4	4L ★
	6	6L ★
	8	8L

电压 Voltage type	1	交流 110VAC, 50/60Hz
	2	交流★ 220VAC, 50/60Hz
	9	直流24VDC

油箱 Oil tank	空白	树脂油箱 Resin oil tank
	A	金属油箱不带回油装置 Metal oil tank without oil return device

液位开关 Liquid level switch	W	无液位开关 Without level monitor
空白 Blank		有液位开关 with level monitor ★

出口管径 Outlet pipe diameter	6	接Φ6管★ Connected to Φ6 pipe
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吐油量 Throughput	2	200mL/min ★
	5	150mL/min ★

*吐油量: 1、当油箱容积2L时为150mL/min
2、当油箱容积3L及以上时为200mL/min
*Throughput: 1. 150mL/min when the tank volume is 2L
2. 200mL/min when the tank volume is 3L and above

性能与特点

- 系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。润滑时间和间歇时间均可调整。(内置有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警、并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定, "LUB"润滑时间: 1-999(秒)
"INT"间歇时间: 1-999(分)(特殊要求可定制)
- 面板指示灯可显示出注油机的润滑和间歇状态。
- 系统可使用"RST"键, 强制润滑或消除异常报警信号。
- 单次最长润滑时间≤2min, 间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能, 防止电机温度过高及过载。
- 在容积式系统中设有脱压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护注油机及管路由于压力过高而损坏。

Performance and characteristics

- The system is configured with 3 action modes.
 - Lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed (Time unit convertible).
 - Memory: in case of power on after power off, resume incomplete intermittent time. lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds) INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Single maximum lubrication time ≤ 2 min, and intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection function to avoid high motor temperature and overload.
- Decompression device is provided with volumetric system, used with BFA/BFB/BFD/BFE/BFG/BFH distributor, Refer to page 19-24.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

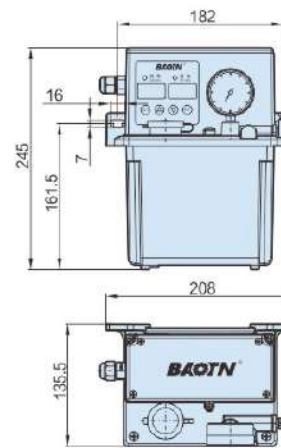
规格型号及技术参数 Specifications, models and technical parameters

项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐油量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTA-A2	AC110 AC220 DC 24V	20	1-999	1.5	2.5	150 200	Φ 6	可选配 Optional	有 Yes	有 Yes		2(树脂 Resin)	2.90
												3(树脂 Resin)	3.20
												4(树脂 Resin)	3.30
												4(钣金 Metal plate)	5.70
												6(钣金 Metal plate)	6.00
8(钣金 Metal plate)	6.50												

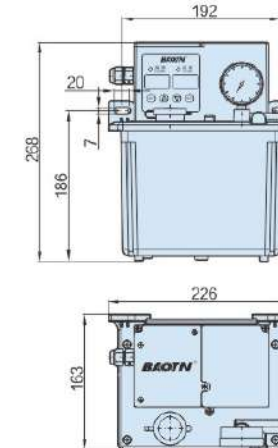
间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)



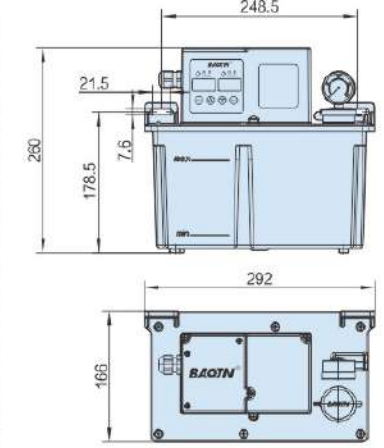
BTA-A2P2
(树脂油箱 Resin oil tank)



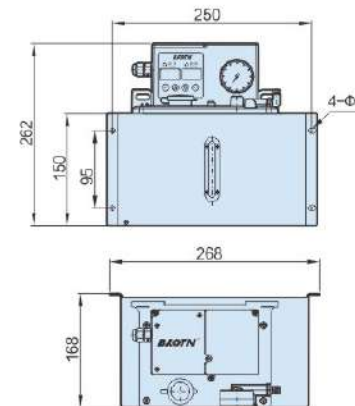
BTA-A2P3
(树脂油箱 Resin oil tank)



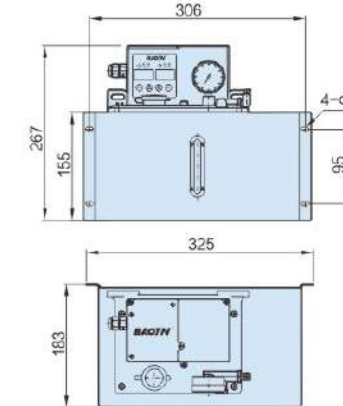
BTA-A2P4
(树脂油箱 Resin oil tank)



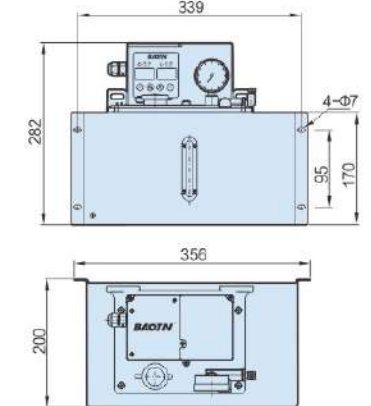
BTA-A2P4
(钣金油箱 Sheet metal oil tank)



BTA-A2P6
(钣金油箱 Sheet metal oil tank)



BTA-A2P8
(钣金油箱 Sheet metal oil tank)



BTA-C2 型 (Type)

PLC 控制稀油润滑泵 PLC control thin oil lubrication pump



注：★表示优选型号
Note: ★ indicates preferred model

订货编制说明 Order description

BTA-C2 □ □ - □ □ □ □ □ □

压力开关 Pressure switch	P	压力开关★ Pressure switch
空白 Blank		无 None

油箱容积 Oil tank volume	2	2L ★
	3	3L ★
	4	4L ★
	6	6L ★
	8	8L

电压 Voltage type	1	交流 110VAC, 50/60Hz
	2	交流★ 220VAC, 50/60Hz
	9	直流24VDC

油箱 Oil tank	空白	树脂油箱 Resin oil tank
	A	金属油箱不带回油装置★ Metal oil tank without oil return device

液位开关 Liquid level switch	D	上通电 Normal Close
空白 Blank		下通电★ Normal Open

出油口径管径 Outlet pipe diameter	6	接Φ6管★ Connected to Φ6 pipe
-----------------------------	---	-------------------------------

吐油量 Throughput	2	200mL/min ★
	5	150mL/min ★

*吐油量: 1. 当油箱容积2L时为150mL/min
2. 当油箱容积3L及以上时为200mL/min
*Throughput: 1. 150mL/min when the tank volume is 2L
2. 200mL/min when the tank volume is 3L and above

性能与特点

- 设有液位开关、压力开关 (可选配)。当油量或压力不足时可将异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有“FEED”键, 可强制润滑。
- 时间设定: 单次最长润滑时间≤2min, 间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能, 防止电机温度过高及过载。
- 在容积式系统中设有减压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏IC板和电机。

Performance and characteristics

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- Time setting: single maximum lubrication duration≤2min, and intermittent time shall be 5 times of the lubrication time.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- The volumetric system is provided with decompression device, used with BFA/BFB/BFD/BFE/BFG/BFH distributor. Refer to page 19~24.
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

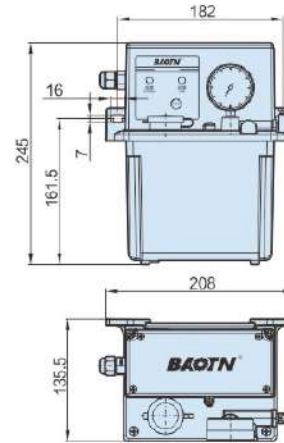
规格型号及技术参数 Specifications, models and technical parameters

项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐油量 Throughput (mL/min)	出油口径管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTA-C2	AC110 AC220 DC 24V	20	由外部 PLC 控制 Controlled by an external PLC		1.5	2.5	150 200	Φ 6	可选配 Optional	上通电 或 下通电 Power supply at upper or lower position	无 No	2(树脂 Resin)	2.90
												3(树脂 Resin)	3.20
												4(树脂 Resin)	3.30
												4(钣金 Metal plate)	5.70
												6(钣金 Metal plate)	6.00
												8(钣金 Metal plate)	6.50

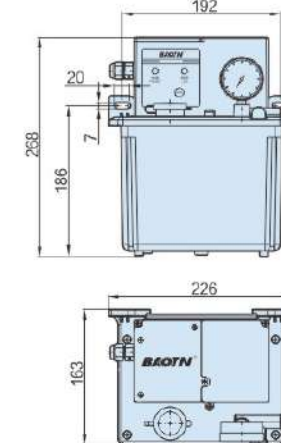
间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)



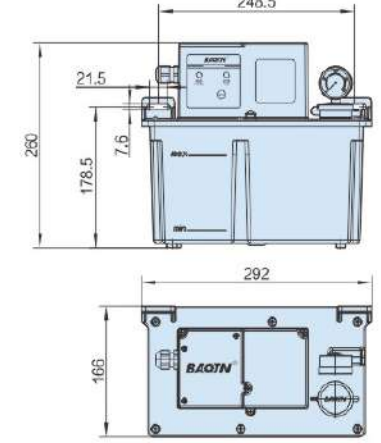
BTA-C2P2
(树脂油箱 Resin oil tank)



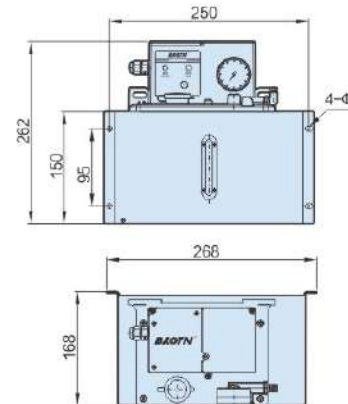
BTA-C2P3
(树脂油箱 Resin oil tank)



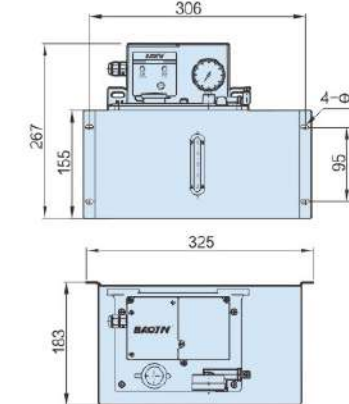
BTA-C2P4
(树脂油箱 Resin oil tank)



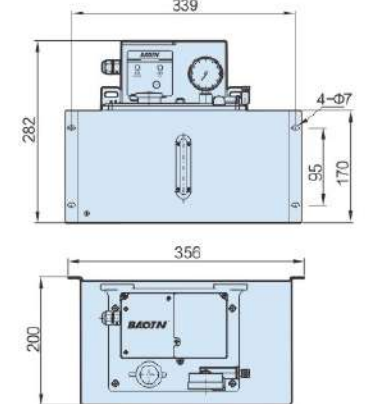
BTA-C2P4
(钣金油箱 Sheet metal oil tank)



BTA-C2P6
(钣金油箱 Sheet metal oil tank)



BTA-C2P8
(钣金油箱 Sheet metal oil tank)



型号编制说明 Model description

BTB-A2 □ □ - □ □ □ □ - □ □



注: ★表示优选型号
Note: ★ indicates preferred model

压力开关 Pressure switch		油箱 Oil tank	
P	压力开关★ Pressure switch	空白	树脂油箱 Resin oil tank
空白	无 None	A	金属油箱不带回油装置★ Metal oil tank without oil return device
油箱容积 Oil tank volume		液位开关 Liquid level switch	
3	3L ★	W	无液位开关 Without level monitor
4	4L ★	空白	有液位开关★ with level monitor
6	6L ★	出口管径 Outlet pipe diameter	
8	8L ★	6	接Φ6管 Connected to Φ6 pipe ★
电压 Voltage type		吐油量 Throughput	
1	交流 110VAC, 50/60Hz	1	100mL/min
2	交流 220VAC, 50/60Hz ★	2	200mL/min ★
3	交流 380VAC, 50/60Hz	3	300mL/min
8	直流 12VDC		
9	直流 24VDC		

性能与特点

- 系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警, 并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定, "LUB"润滑时间: 1-999(秒)
"INT"间歇时间: 1-999(分)
(特殊要求可定制)
- 面板指示灯可显示出注油机的润滑和间歇状态。
- 系统可使用"RST"键强制润滑或消除异常报警信号。
- 在容积式系统中设有减压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19-24页。
- 设有溢流阀, 可保护注油机及管路由于压力过高而损坏。

Performance and characteristics

- The system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed.
 - Memory: in case of power on after power on, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds)
INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Decompression device is provided with volumetric system, used with BFA/BFB/BFD/BFE/BFG/BFH distributor, Refer to page 19-24.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

规格型号及技术参数 Specifications, models and technical parameters

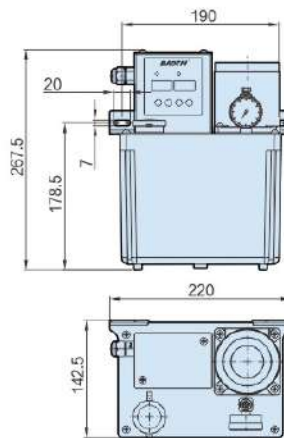
(工作制 S2=5min)
(Work system S2=5min)

项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐油量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTB-A2	单相 1-phase	110/220	25	1-999	1.5	3.5	100	Φ 6	可选配 Optional	有 Yes	有 Yes	3(树脂 Resin)	4.2
	三相 3-phases	220/380	25 or 40									4(树脂 Resin)	4.5
		415/440 460										6(钣金 Metal plate)	6.4
直流 Direct current	DC12/24	60	8(钣金 Metal plate)	7.0									
												10.0	

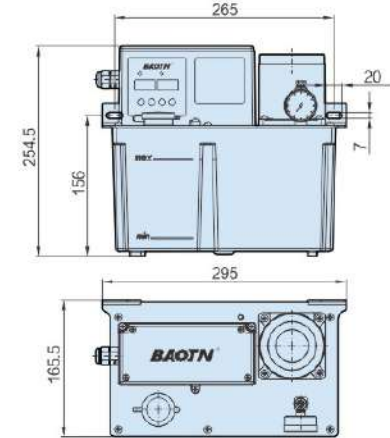
注: 润滑时间与间歇时间可根据客户要求订制。Notes: Lubrication time and intermittent time can be tailored to customers' requirements.



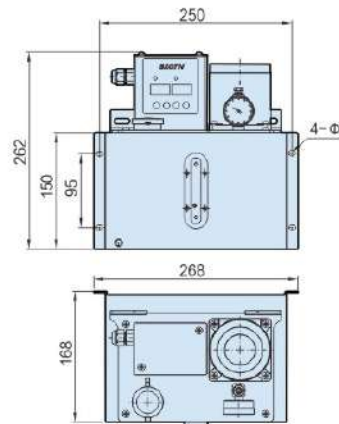
BTB-A2P3
(树脂油箱 Resin oil tank)



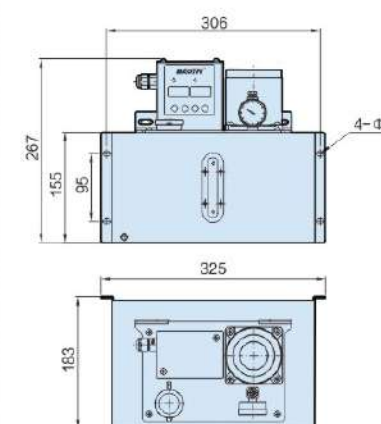
BTB-A2P4
(树脂油箱 Resin oil tank)



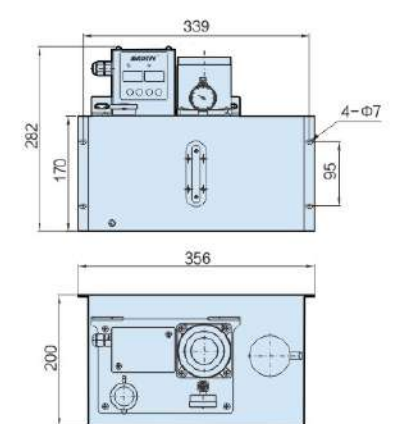
BTB-A2P4
(钣金油箱 Sheet metal oil tank)



BTB-A2P6
(钣金油箱 Sheet metal oil tank)



BTB-A2P8
(钣金油箱 Sheet metal oil tank)



BTB-C2型(Type)

PLC控制稀油润滑泵 PLC control thin oil lubrication pump

■ 间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

型号编制说明 Model description

BTB-C2 □ □ - □ □ □ □ - □ □



压力开关 Pressure switch	
P	压力开关★ Pressure switch
空白	无 None

油箱容积 Oil tank volume	
3	3L ★
4	4L ★
6	6L ★
8	8L ★

电压 Voltage type	
1	交流 110VAC, 50/60Hz
2	交流 220VAC, 50/60Hz ★
3	交流 380VAC, 50/60Hz
8	直流 12VDC
9	直流 24VDC

油箱 Oil tank	
空白	树脂油箱 Resin oil tank
A	金属油箱不带回油装置★ Metal oil tank without oil return device

液位开关 Liquid level switch	
W	无液位开关 Without level monitor
空白	有液位开关★ with level monitor

出油口径 Outlet pipe diameter	
6	接Φ6管★ Connected to Φ6 pipe

吐油量 Throughout	
1	100mL/min
2	200mL/min ★
3	300mL/min

注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 设有液位开关、压力开关 (可选配)。当油量或压力不足时将异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有“FEED”键, 可强制润滑。
- 在容积式系统中设有减压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏IC板和电机。

Performance and characteristics

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- The volumetric system is provided with decompression device, used with BFA/BFB/BFD/BFE/BFG/BFH distributor. Refer to page 19-24.
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

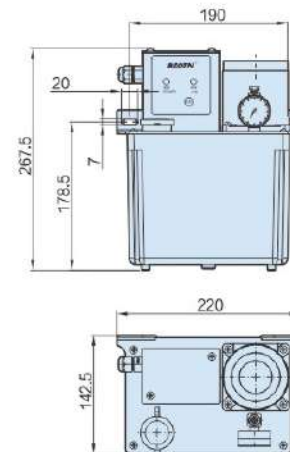
规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=5min)
(Work system S2=5min)

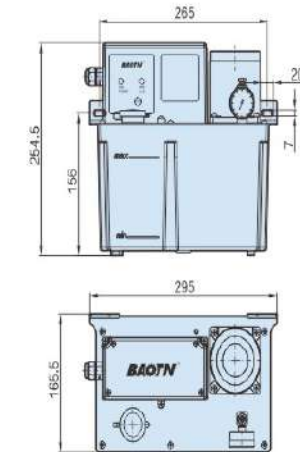
项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐油量 Throughout (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTB-C2	单相 1-phase	110/220	25	由外部 PLC 控制 Controlled by an external PLC	1.5	3.5	100	Φ 6	可选配 Optional	上通电或下通电 Power supply at upper or lower position	无 No	3(树脂 Resin)	4.2
	三相 3-phases	220/380 415/440 460	25or40									4(树脂 Resin)	4.5
												6(钣金 Metal plate)	6.4
直流 Direct current	DC12/24	60	8(钣金 Metal plate)	10.0									



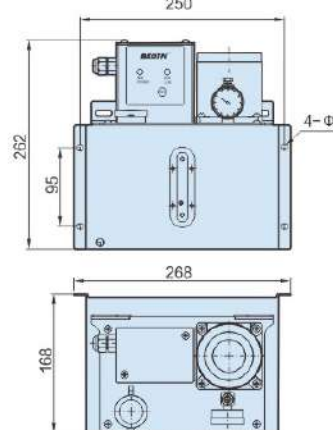
BTB-C2P3
(树脂油箱 Resin oil tank)



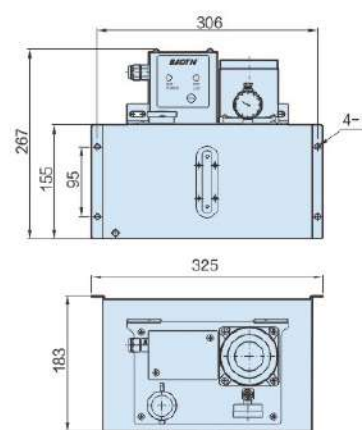
BTB-C2P4
(树脂油箱 Resin oil tank)



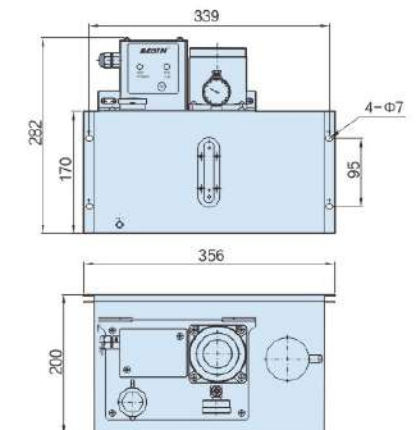
BTB-C2P4
(钣金油箱 Sheet metal oil tank)



BTB-C2P6
(钣金油箱 Sheet metal oil tank)



BTB-C2P8
(钣金油箱 Sheet metal oil tank)

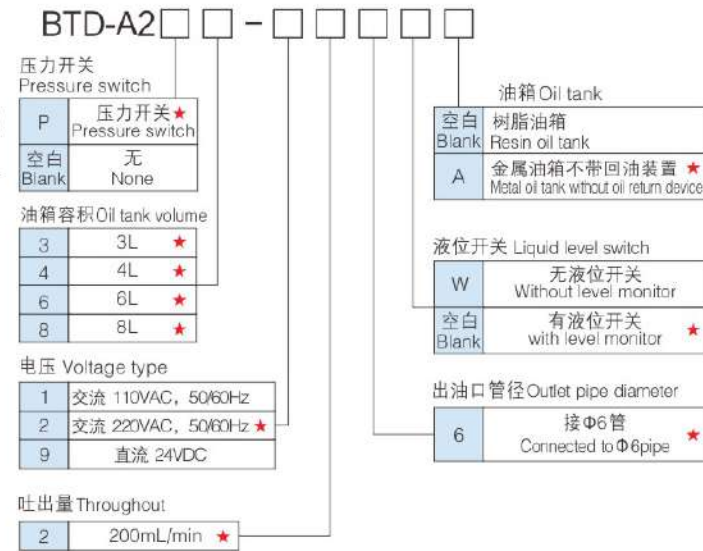


BTD-A2型(Type)

数显稀油润滑泵 Thin oil lubrication pump with digital display

■ 间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description



注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警, 并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定, "LUB"润滑时间: 1-999 (秒)
"INT"间歇时间: 1-999 (分)
(特殊要求可定制)
- 面板指示灯可显示出润滑泵的润滑和间歇状态。
- 系统可使用"RST"键强制润滑或消除异常报警信号。
- 在容积式系统中设有脱压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19-24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。

Performance and characteristics

- The system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed (Time unit convertible).
 - Memory: in case of power on after power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds)
INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Decompression device is provided with volumetric system, used with BFA/BFB/BFD/BFE/BFG/BFH, Refer to page 19-24.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

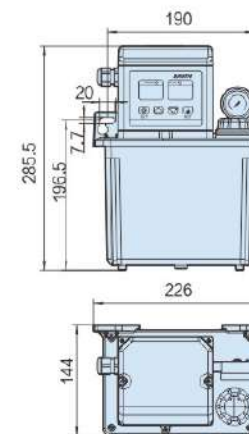
规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=5min)
(Work system S2=5min)

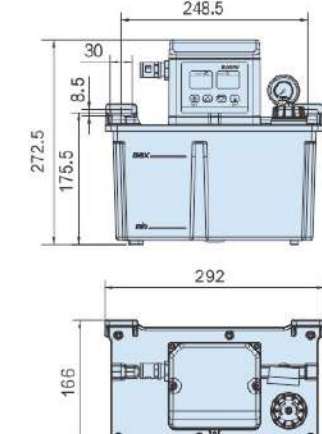
项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTD-A2	DC24	20	1-999		2.0	3.0	200	Φ 6	可选配 Optional	有 Yes	有 Yes	3(树脂 Resin)	4.2
												4(树脂 Resin)	4.5
	AC220	45										4(钣金 Metal plate)	6.4
												6(钣金 Metal plate)	7.0
												8(钣金 Metal plate)	10.0



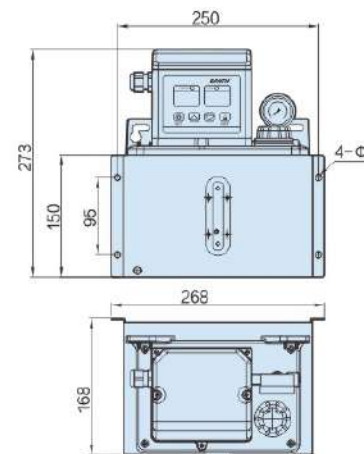
BTD-A2P3
(树脂油箱 Resin oil tank)



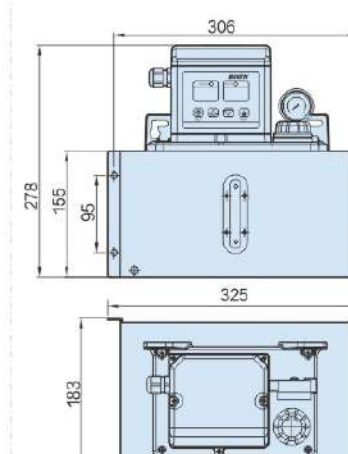
BTD-A2P4
(树脂油箱 Resin oil tank)



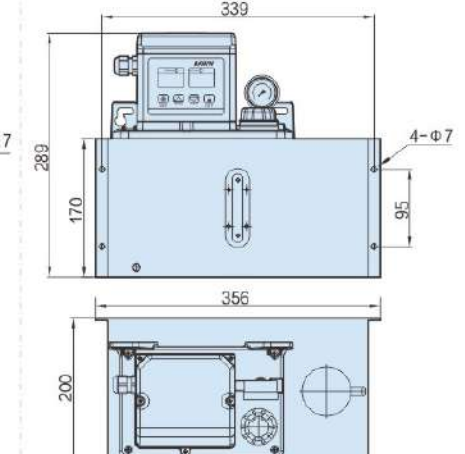
BTD-A2P4
(钣金油箱 Sheet metal oil tank)



BTD-A2P6
(钣金油箱 Sheet metal oil tank)



BTD-A2P8
(钣金油箱 Sheet metal oil tank)



BTD-C2型(Type)

PLC控制稀油润滑泵(内部有IC电路板) PLC control thin oil lubrication pump

间歇型电动稀油润滑泵(齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description

BTD-C2□□-□□□□□□

压力开关 Pressure switch		油箱 Oil tank
P	压力开关★ Pressure switch	空白 树脂油箱 Blank Resin oil tank
空白	无 None	A 金属油箱不带回油装置★ Metal oil tank without oil return device
油箱容积 Oil tank volume		液位开关 Liquid level switch
3	3L★	D 上通电★ Normal Close
4	4L★	空白 下通电★ Blank Normal Open
6	6L★	
8	8L★	出口管径 Outlet pipe diameter
电压 Voltage type		6 接Φ6管★ Connected to Φ6 pipe
2	交流 220VAC, 50/60Hz★	
9	直流 24VDC	
吐出量 Throughput		
2	200mL/min★	



注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 设有液位开关、压力开关(可选配)。当油量或压力不足时将异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有“FEED”键,可强制润滑。
- 在容积式系统中设有减压装置,需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用,参考19~24页。
- 设有溢流阀,可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏IC板和电机。

Performance and characteristics

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- The volumetric system is provided with decompression device, used with BFA/BFB/BFD/BFE/BFG/BFH distributor. Refer to page 19~24.
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

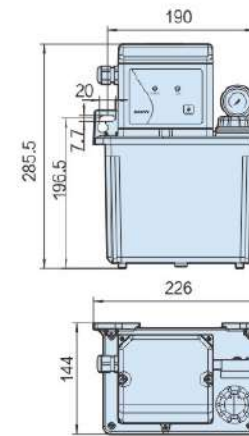
规格型号及技术参数 Specifications, models and technical parameters

项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTD-C2	DC24	20	由外部 PLC 控制 Controlled by an external PLC		2.0	3.0	200	Φ 6	可选配 Optional	有 Yes	无 No	3(树脂 Resin)	4.2
												4(树脂 Resin)	4.5
	4(钣金 Metal plate)	6.4											
	6(钣金 Metal plate)	7.0											
	AC220	45										8(钣金 Metal plate)	10.0

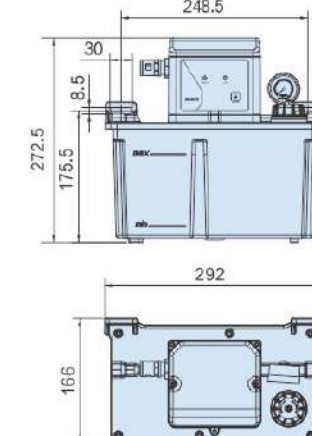
(工作制 S2=5min)
(Work system S2=5min)



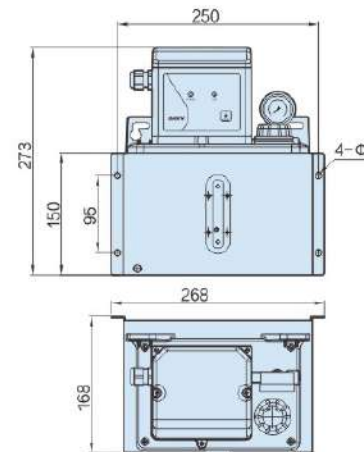
BTD-C2P3
(树脂油箱 Resin oil tank)



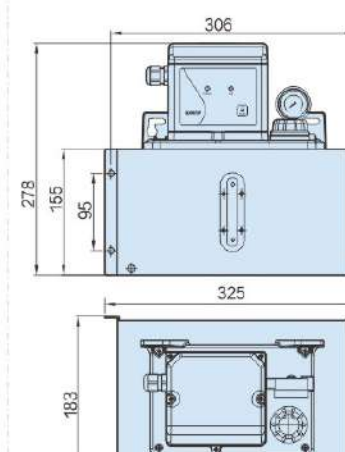
BTD-C2P4
(树脂油箱 Resin oil tank)



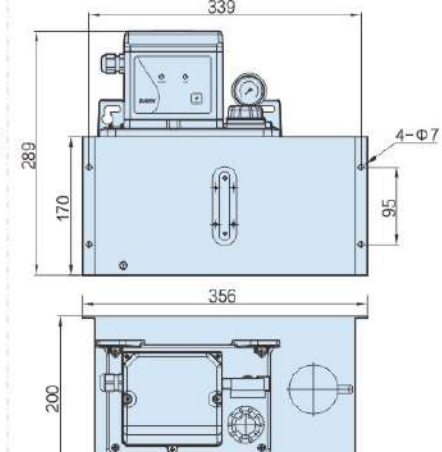
BTD-C2P4
(钣金油箱 Sheet metal oil tank)



BTD-C2P6
(钣金油箱 Sheet metal oil tank)



BTD-C2P8
(钣金油箱 Sheet metal oil tank)



BTD-02 型 (Type)

PLC控制稀油润滑泵 (内部无IC电路板) PLC control thin oil lubrication pump

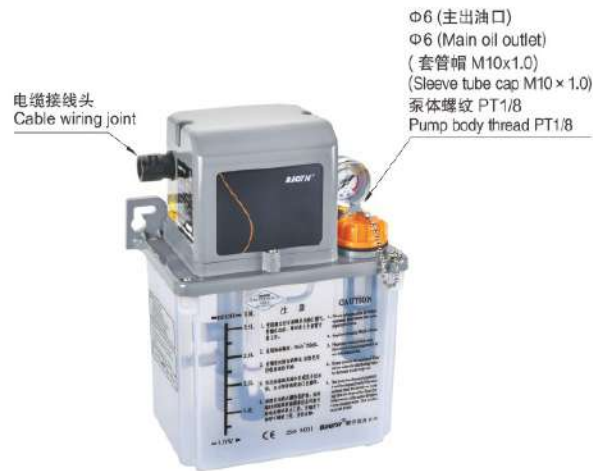
间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description

BTD-02 □ □ - □ □ □ □ □ □ □ □

压力开关 Pressure switch	P	压力开关★ Pressure switch
空白 Blank		无 None
油箱容积 Oil tank volume	3	3L ★
	4	4L ★
	6	6L ★
	8	8L ★
电压 Voltage type	2	交流 220VAC, 50/60Hz ★
	9	直流 24VDC
吐出量 Throughput	2	200mL/min ★

油箱 Oil tank	空白 树脂油箱 Blank Resin oil tank
	A 金属油箱不带回油装置★ Metal oil tank without oil return device
液位开关 Liquid level switch	D 上通电 Blank Normal Close
	空白 下通电★ Blank Normal Open
出油口径 Outlet pipe diameter	6 接Φ6管★ Connected to Φ6 pipe



注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 设有液位开关、压力开关 (可选配)。当油量或压力不足时将异常信号输出。
- 在容积式系统中设有减压装置, 需配合BFA/BFB/BFD/BFE/BFG/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。

Performance and characteristics

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The volumetric system is provided with decompression device, used with BFA/BFB/BFD/BFE/BFG/BFH distributor. Refer to page 19~24.
- Overflow valve is provided to prevent damage by oil injector and pipeline.

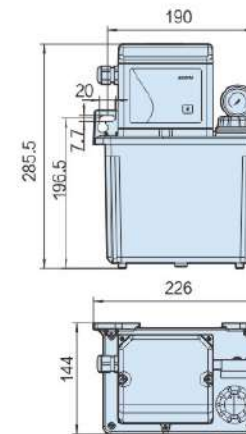
规格型号及技术参数 Specifications, models and technical parameters

项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTD-02	DC24	20	由外部 PLC 控制 Controlled by an external PLC		2.0	3.5	200	Φ 6	可选配 Optional	有 Yes	无 No	3 (树脂 Resin)	4.2
	AC220	45										4 (树脂 Resin)	4.5
												6 (钣金 Metal plate)	7.0
												8 (钣金 Metal plate)	10.0

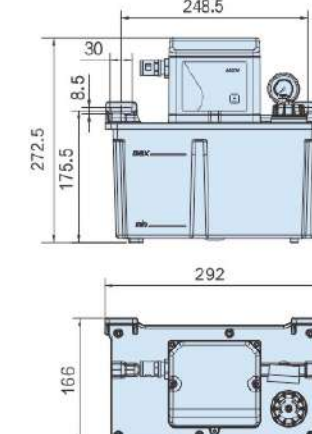
(工作制 S2=5min)
(Work system S2=5min)



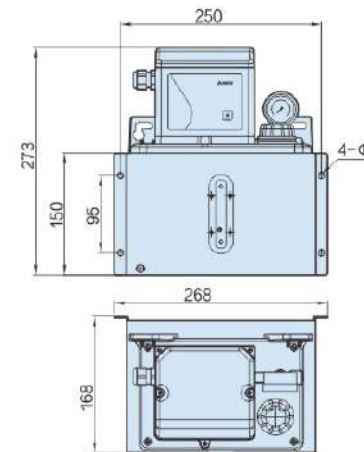
BTD-02P3
(树脂油箱 Resin oil tank)



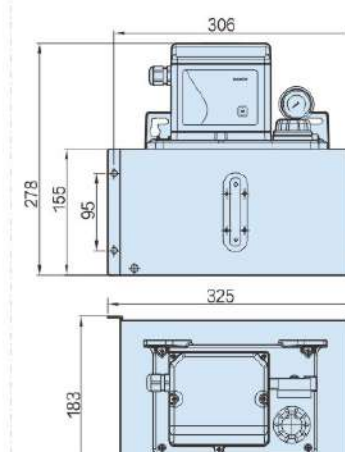
BTD-02P4
(树脂油箱 Resin oil tank)



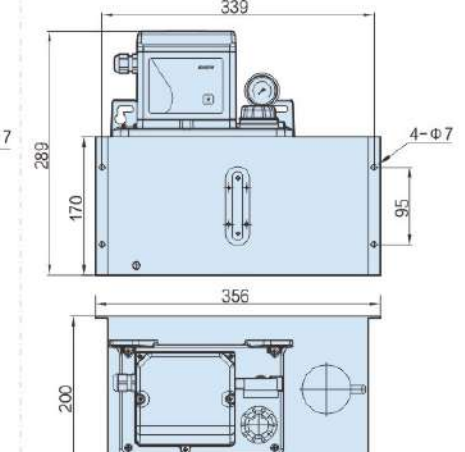
BTD-02P4
(钣金油箱 Sheet metal oil tank)



BTD-02P6
(钣金油箱 Sheet metal oil tank)



BTD-02P8
(钣金油箱 Sheet metal oil tank)

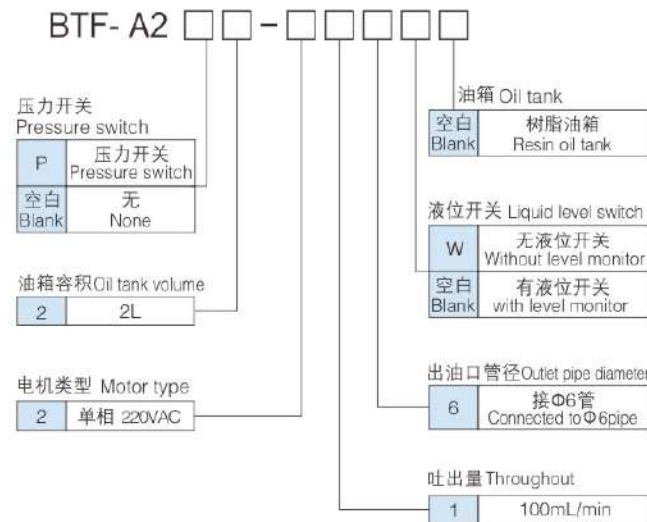


BTF-A2 型(Type)

数显稀油润滑泵 Thin oil lubrication pump with digital display



订货编制说明 Order description



Performance and characteristics

- The Digital display system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed (Time unit convertible).
 - Memory: in case of power on after power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds) INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Single maximum lubrication time ≤ 2 min, and intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection function to avoid high motor temperature and overload.
- Decompression device is provided with volumetric system, used with BFA/BFB/BFD/BFE/BFH distributor. Refer to page 19-24.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

性能与特点

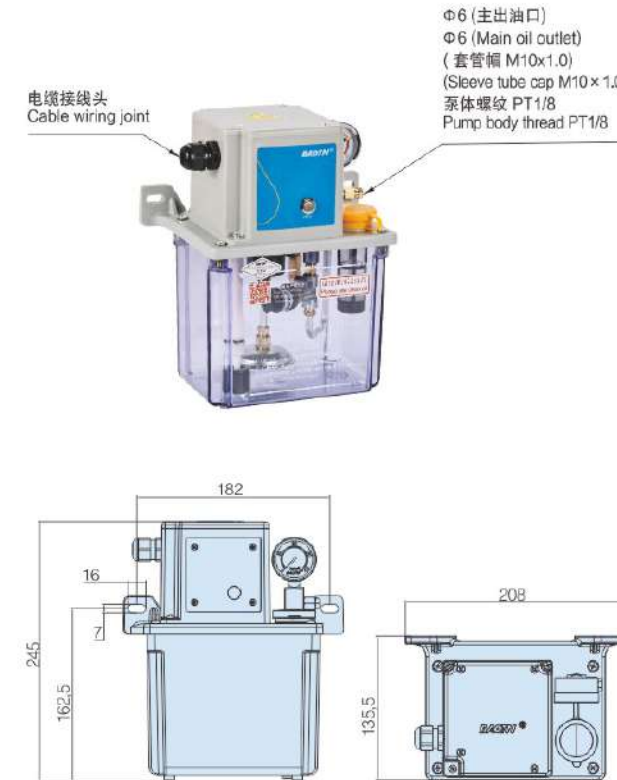
- 数显控制系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警, 并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定, "LUB"润滑时间: 1-999(秒) "INT"间歇时间: 1-999(分)(特殊要求可定制)
- 面板指示灯可显示出润滑泵的润滑和间歇状态。
- 系统可使用复位键, 强制润滑或消除异常报警信号。
- 单次最长润滑时间 ≤ 2min, 间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能, 防止电机温度过高及过载。
- 在容积式系统中设有脱压装置, 需配合BFA/BFB/BFD/BFE/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。

规格型号及技术参数 Specifications, models and technical parameters

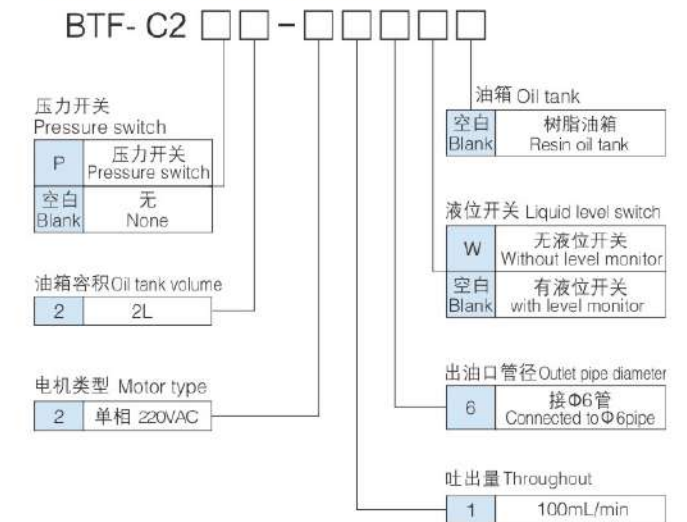
项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐出量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 voltage (V)	输出功率 output power (W)											
BTF-A2	AC220	18	1-999		1.5	2.5	100	Φ 6	可选配 Optional	有 Yes	有 Yes	2(树脂 Resin)	2.4

BTF-C2 型(Type)

PLC 控制稀油润滑泵 PLC control thin oil lubrication pump



订货编制说明 Order description



Performance and characteristics

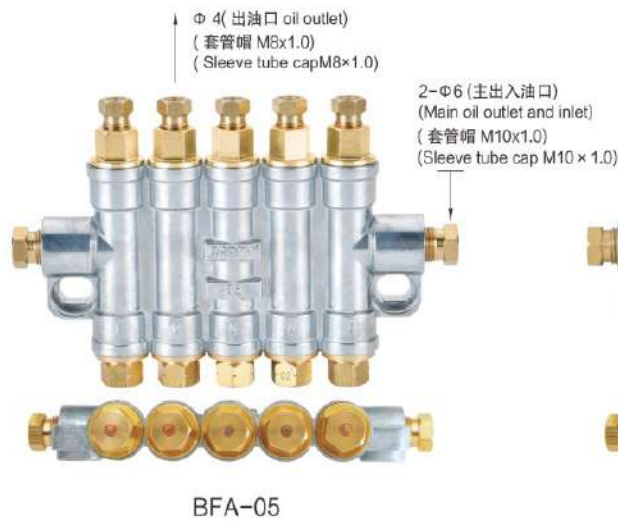
- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- Time setting: single maximum lubrication duration ≤ 2min, and the intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- Decompression device is provided with volumetric system, used with BFA/BFB/BFD/BFE/BFH distributor. Refer to page 19-24.
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent motor damaged by short circuit.

性能与特点

- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警, 并将异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有"FEED"键, 可强制润滑。
- 时间设定: 单次最长润滑时间 ≤ 2min, 间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能, 防止电机温度过高及过载。
- 在容积式系统中设有脱压装置, 需配合BFA/BFB/BFD/BFE/BFH分配器使用, 参考19~24页。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏电机。

规格型号及技术参数 Specifications, models and technical parameters

项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐出量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 voltage (V)	输出功率 output power (W)											
BTF-C2	AC220	18	由外部 PLC 控制 Controlled by an external PLC		1.5	2.5	100	Φ 6	可选配 Optional	有 Yes	无 No	2(树脂 Resin)	2.4



订货编制说明

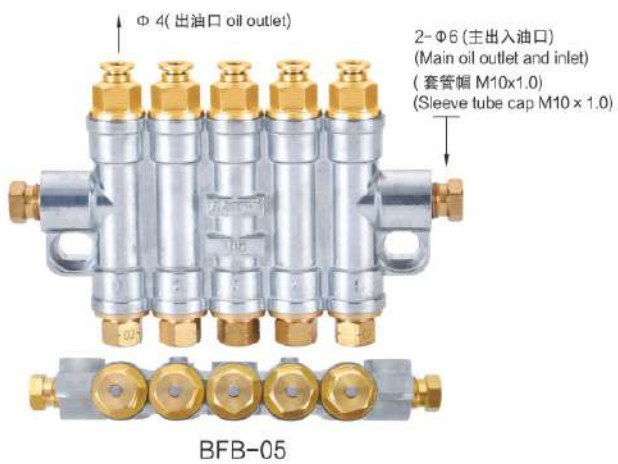
Order description

BFA/BFB - □ - □ - □

入油口数 Quantity of oil inlets	
空白 Blank	双入油口 Double oil inlet
S	单入油口 single inlet

油量代号 Oil quantity code	
1	0.1mL
2	0.2mL
3	0.3mL
4	0.4mL
5	0.5mL

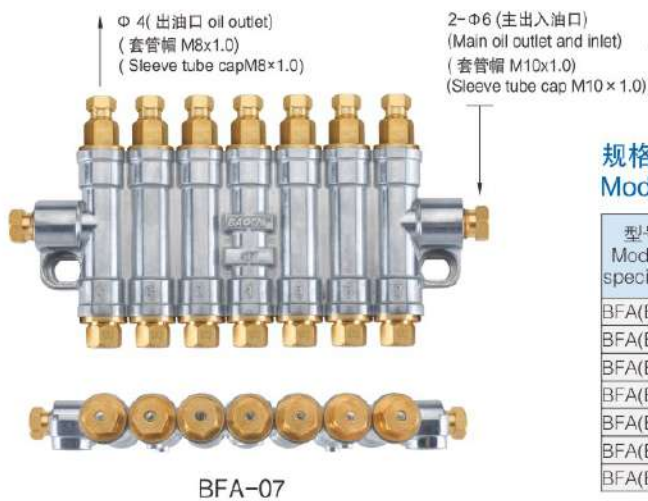
出油口数
Quantity of oil outlets



- 油量表示方法:(注:当所有出油口油量值一样时,只用一个油量值表示)
- 例1:BFA/BFB-05-2 表示BFA/BFB型5位分配器第1, 2, 3, 4, 5出油口油量全部为0.2毫升/次。
- 例2:BFA/BFB-05-53235 表示BFA/BFB型5位分配器第1, 2, 3, 4, 5出油口油量分别为0.5; 0.3; 0.2; 0.3; 0.5毫升/次。
- 适用环境温度: -10℃至50℃

- Oil volume indication: (notes: when oil volume values of all oil outlets are identical, represented with one oil volume).
- Example 1: BFA/BFB-05-02 means 5-position distributor with model of BFA/BFB, oil delivery volume of oil outlets 1, 2, 3, 4 and 5 is 0.2mL/time.
- Example 2: BFA/BFB-05-53235 means that outlet oil volumes of outlets 1, 2, 3, 4 and 5 of 5-position distributors with model of BFA are 0.5, 0.3, 0.2, 0.3 and 0.5mL/time.

- Applicable ambient temperature: -10℃ to 50℃

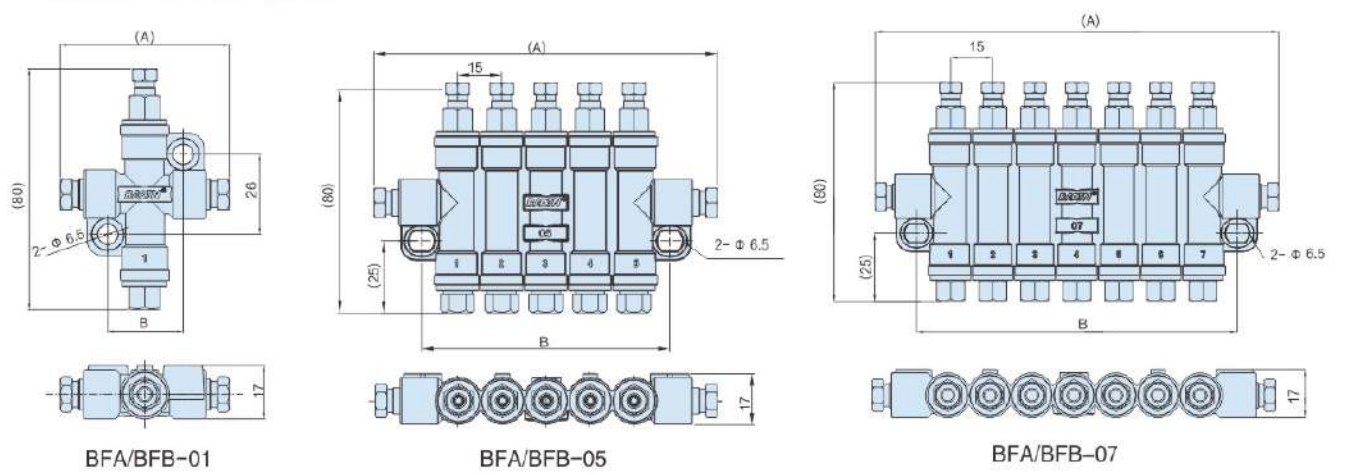


规格型号及技术参数:

Models, specifications and technical parameters

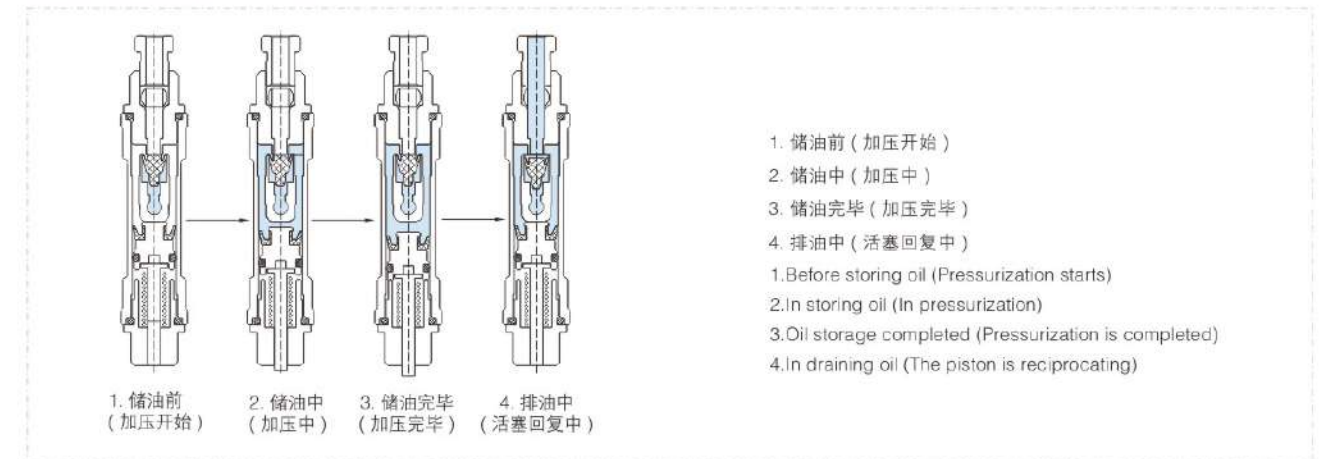
型号规格 Models and specifications	出口数 Outlet quantity	A	B	工作压力 Work pressure (MPa)	适用油品粘度 Applicable oil Viscosity (cSt)	吐油量 Throughput (mL/cy)	重量 Weight (g)
BFA(BFB)-01	1	55	24.5	1.0-2.0	32-220	0.1/0.2/0.3 /0.4/0.5	96
BFA(BFB)-02	2	69	39				168
BFA(BFB)-03	3	86	54.5				232
BFA(BFB)-04	4	102	69.5				299
BFA(BFB)-05	5	116.5	84.5				359
BFA(BFB)-06	6	130	99.5				464
BFA(BFB)-07	7	144	114.5				493

产品外形尺寸图



BFA/BFB 分配器工作原理图

Schematic diagram of the BFA/BFB distributor

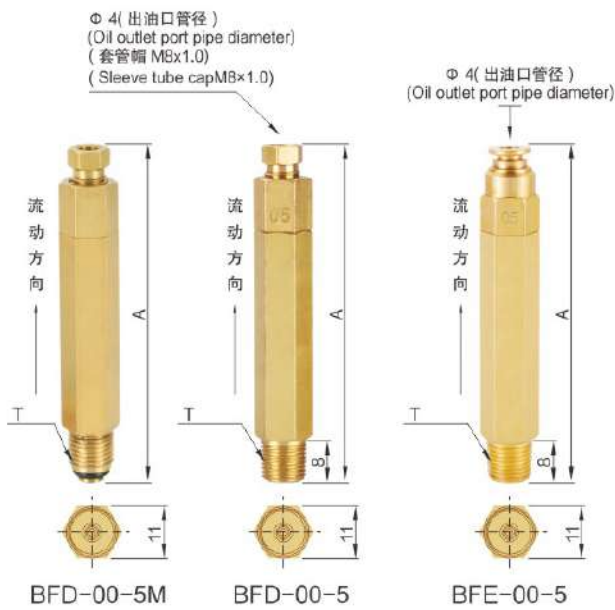


BFA/BFB 分配器工作原理说明

Rationale of the BFA/BFB distributor

- 从润滑泵输送出的润滑油, 经BFA/BFB分配器中的伞形阀门开始往上推动。
- 当伞形阀门把出油孔封闭后, 油压迫使储油块克服弹簧力开始下降, 使油腔开始储油。
- 当BFA/BFB储油块被顶至油腔顶点时, BFA/BFB储油完毕。
- 当润滑泵停止供油时, 其卸压阀自动开启, 使主油管内润滑油通过卸压阀回油。此时系统压力下降, 同时伞形阀复位封闭进油口, 而BFA/BFB储油块在弹簧力的作用下开始把油腔内的润滑油往出油口压出。
- Lubricant delivered from the oil injector starts to drive through the umbrella valve in the BFA/BFB distributor.
- When the umbrella valve closes the oil outlet hole, oil pressure forces oil storage block to overcome spring force and lower down, and the oil cavity starts to store oil.
- When BFA/BFB oil storage block arrives at the top of the oil cavity, storing oil by BFA/BFB is completed.
- When the oil pump stops supplying oil, the decompression valve is automatically opened to make lubricant in the main oil pipe to return through the decompression valve. The system pressure is lowered, the umbrella valve resets and closes the inlet oil, and the BFA/BFB oil storage block compresses the lubricant in the oil cavity to the the oil outlet port.

单支定量加压式稀油分配器 Single pressurization thin oil distributor



订货编制说明 Order description

BFD/BFE-00-□□

油量代号 Oil quantity code	油量
05	0.05mL
1	0.1mL
2	0.2mL
3	0.3mL
4	0.4mL
5	0.5mL

螺纹形式 Thread form	螺纹形式
Blank	PT1/8
M	M10X1

规格型号及技术参数 Models, specifications and technical parameters

型号规格 Models and specifications	吐出量 Throughput (mL/cy)	工作压力 Work pressure (MPa)	适用油品粘度 Applicable oil Viscosity (cSt)	A	记号 Mark	T	重量 Weight (g)
BFD/BFE-00-05	0.05	1.5-3.0	32-220	53	00	M10X1	38
BFD/BFE-00-1	0.1			53	01		38
BFD/BFE-00-2	0.2			60	02		44
BFD/BFE-00-3	0.3			60	03		44
BFD/BFE-00-4	0.4			71	04		54
BFD/BFE-00-5	0.5	71	05	54			

定量加压式稀油分配器 Quantified pressurized thin oil distributor



订货编制说明 Order description

BFD/BFE-□□-□□-□□-□□

出油口数 Quantity of oil outlets	油量代号 Oil quantity code	单支本体螺纹 Single body thread	入油口类型 inlet type	入油口数 Quantity of oil inlets
5	0.05mL	Blank	Blank	Blank
1	0.1mL	M	K	S
2	0.2mL			
3	0.3mL			
4	0.4mL			
5	0.5mL			

注: ★表示优选型号
Note: ★ indicates preferred model

- 油量表示方法:(注:当所有出油口油量值一样时,只用一个油量值表示)
- 例1:BFD/BFE-05-2表示BFD/BFE型5位分配器第1,2,3,4,5出油口油量全部为0.2毫升/次。
- 例2:BFD/BFE-05-53235表示BFD/BFE型5位分配器第1,2,3,4,5出油口油量分别为0.5;0.3;0.2;0.3;0.5毫升/次。
- 适用环境温度:-10℃至50℃
- ※注:出油口数1-12位为常规款。
- Oil volume indication: (notes: when oil volume values of all oil outlets are identical, represented with one oil volume).
- Example 1: BFD/BFE-05-02 means 5-position distributor with model of BFD/BFE, oil delivery volume of oil outlets 1, 2, 3, 4 and 5 is 0.2mL/time.
- Example 2: BFD/BFE-05-53235 means that outlet oil volumes of outlets 1, 2, 3, 4 and 5 of 5-position distributors with model of BFD/BFE are 0.5, 0.3, 0.2, 0.3 and 0.5mL/time.
- Applicable ambient temperature:-10℃ to 50℃
- ※ Note: The number of oil outlets 1-12 is the conventional model.

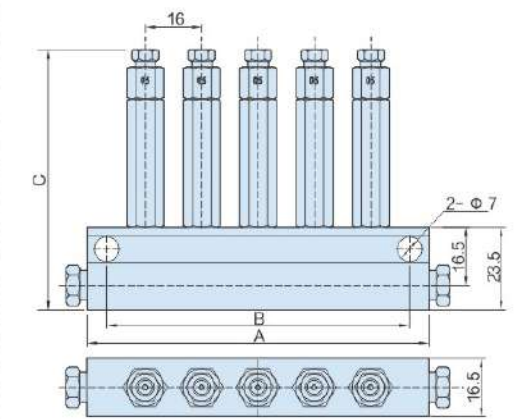
容积式稀油分配器 Volumetric thin oil distributor

规格型号及技术参数 Models, specifications and technical parameters

型号规格 Models and specifications	出口数 Outlet quantity	A	B	C	工作压力 Work pressure (MPa)	适用油品粘度 Applicable oil Viscosity (cSt)	吐出量 Throughput (mL/cy)	重量 Weight (g)
BFD/BFE-02	2	49	38	68-86	1.5-3.0	32-220	0.05; 0.1;	168
BFD/BFE-03	3	65	54	68-86			0.2; 0.3;	232
BFD/BFE-04	4	81	70	68-86			0.4; 0.5.	299
BFD/BFE-05	5	97	86	68-86				359

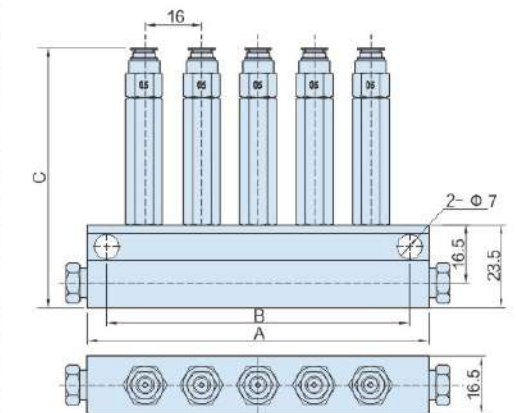
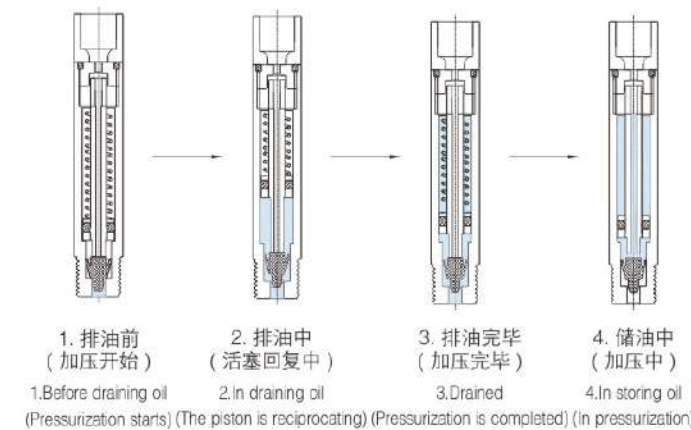
备注: C尺寸0.1cc为68mm, 0.2-0.3cc为75mm, 0.4-0.5cc为86mm。
Remarks: The measurement of C is respectively 68mm, 75mm and 86mm when the throughput is 0.1cc, 0.2-0.3cc, 0.4-0.5cc

产品外形尺寸图 Product dimension figure



BFD-05

BFD/BFE 分配器工作原理图 Schematic diagram of the BFD/BFE distributor



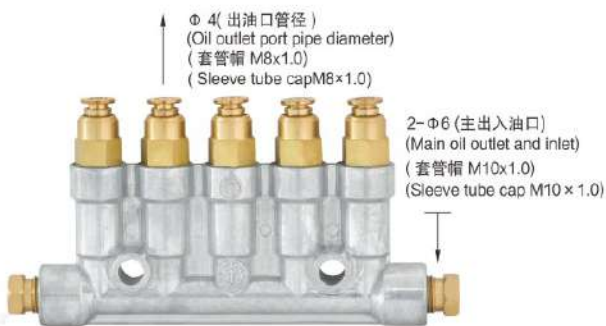
BFE-05

BFD/BFE 分配器工作原理说明 Rationale of the BFD/BFE distributor

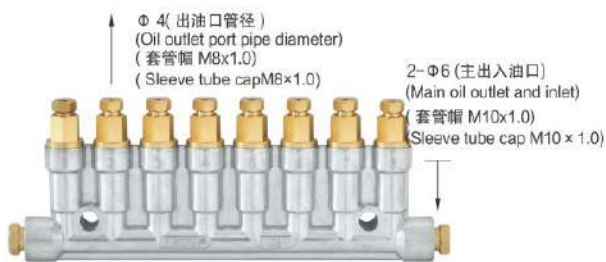
- 从润滑油泵中压送出来的润滑油,使BFD/BFE分配器中的伞形胶开始往上推动。
- 当伞形阀把芯杆中心孔封闭后,迫使活塞克服弹簧力开始上升。将油腔原先存储的润滑油排出。
- 当活塞移至油腔顶点时,排油同时完成。
- 润滑油停止供油时,其泄压阀自动开启,使主油管内润滑油通过卸压阀回油。此时系统压力下降,分配器中的活塞在弹簧的作用下开始复位,当伞形阀复位并封闭分配器进油时,则活塞把存储在下腔的润滑油通过芯杆小孔压送到油腔,同时下次的供油也准备完毕。
- Lubricant delivered from the oil pump makes umbrella valve in the BFD/BFE distributor drive upwards.
- When the umbrella valve closes central hole of the core bar, the piston overcomes the spring force to rise. Lubricant stored in the oil cavity is drained out.
- When piston moves to the top point of oil cavity, oil draining is completed.
- When oil pump stops oil supplying, the pressure release valve is automatically released to make lubricant in the main oil pipe to reset through the decompression valve. At this moment, the system pressure is reduced, and piston in the distributor starts reciprocating with the function of spring. When the umbrella valve resets and closes oil outlet of the distributor, the piston delivers lubricant in the lower cavity through the core bar, and oil supply for the next time is ready.



BFG-05



BFH-05



BFG-08

订货编制说明 Order description

BFG/BFH-□-□-□

入油口数 Quantity of oil inlets	
空白 Blank	双入油口 Double oil inlets
S	单入油口 single inlet

油量代号 Oil quantity code	
03	0.03mL
05	0.05mL
10	0.1mL
16	0.16mL

出油口数
Quantity of oil outlets

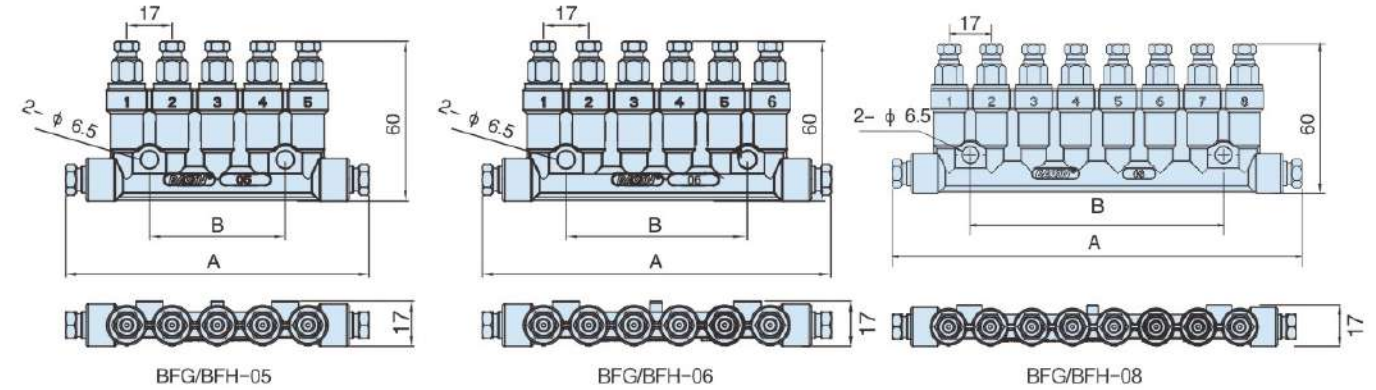
- 油量表示方法: (注: 当所有出油口油量值一样时, 只用一个油量值表示)
- 例1: BFG/BFH-05-10表示BFG/BFH型5口分配器第1, 2, 3, 4, 5出油口油量全部为0.1毫升/次。
- 例2: BFG/BFH-05-1610050303表示BFG/BFH型5口分配器第1, 2, 3, 4, 5出油口油量分别为0.16, 0.1, 0.05, 0.03, 0.03毫升/次。
- 例3: BFG/BFH-05-10-S表示BFG/BFH型5口分配器第1, 2, 3, 4, 5出油口油量全部为0.1毫升/次, 入油主管一端配套管和套管帽; 出油主管一端配塞头。
- 适用环境温度: -10°C至50°C。
- Oil volume indication: (notes: when oil volume values of all oil outlets are identical, represented with one oil volume).
- Example 1: BFG/BFH-05-10 means that the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlet of the BFG/BFH type 5-port distributor is all 0.1mL/time.
- Example 2: BFG/BFH-05-1610050303 means that the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlet of the BFG/BFH type 5-port distributor is 0.16, 0.1, 0.05, 0.03, 0.03 mL/time respectively.
- Example 3: BFG/BFH-05-10-S means that the oil volume of the 1st, 2nd, 3rd, 4th, and 5th oil outlet of the BFG/BFH type 5-port distributor is all 0.1mL/time, and one end of the oil inlet main pipe is matched with a pipe and an official cap; One end of the oil outlet pipe is equipped with a plug.
- Applicable ambient temperature: -10°C to 50°C

规格型号及技术参数:

Models, specifications and technical parameters

型号规格 Models and specifications	出口数 Outlet quantity	A	B	工作压力 Work pressure (MPa)	适用油品粘度 Applicable oil Viscosity (cSt)	吐油量 Throughput (mL/cy)	重量 Weight (g)
BFG/BFH-02	2	63	/	1.5-3.0	32-220	0.03/0.05/0.1/0.16	120
BFG/BFH-03	3	80	17				164
BFG/BFH-04	4	97	34				207
BFG/BFH-05	5	114	51				251
BFG/BFH-06	6	131	68				295
BFG/BFH-07	7	148	85				339
BFG/BFH-08	8	165	102				383

产品外形尺寸图 Product dimension figure



BFG/BFH 分配器工作原理图 Schematic diagram of the BFG/BFH distributor



BFG/BFH 分配器工作原理说明 Rationale of the BFG/BFH distributor

- 从润滑泵输送出的润滑油, 经BFG/BFH分配器中的伞形阀门开始往上推动。
- 当伞形阀把芯杆中心孔封闭后, 迫使活塞克服弹簧力开始上升。将上腔原先存储的润滑油排出。
- 当活塞移至上腔顶点时, 排油同时完成。
- 润滑泵停止供油时, 其泄压阀自动开启, 使主油管内压力油通过卸压阀回油。此时系统压力下降, 分配器中的活塞在弹簧的作用下开始复位, 当伞形阀复位时封闭分配器进油时, 则活塞把存储在下腔的润滑油通过芯杆小孔压送到上腔, 同时下次的供油也准备完毕。
- The lubrication oil delivered from the oil pump starts to push upward through the umbrella valve in the BFG/BFH distributor.
- When the umbrella valve closes the central hole of the core rod, the piston is forced to rise against the spring force. Drain the lubrication oil previously stored in the upper chamber.
- When the piston moves to the top of the upper chamber, the oil discharge is completed at the same time.
- When the oil pump stops supplying oil, its pressure relief valve opens automatically, so that the pressure oil in the main oil pipe reset to the oil through the pressure relief valve. At this time, the system pressure decrease, and the piston in the distributor begins to recover under the action of the spring. When the umbrella valve reposition to close the distributor and enters the oil, the piston presses the lubrication oil stored in the lower chamber to the upper chamber through the small hole of the core rod, and the next fuel supply is also ready.



BFF-05



BFF-07

订货编制说明 Order description

BFF-□□

出油口径 Caliber of oil outlets	3	出油口径为 $\phi 3.2$ The diameter of the outlet pipe is $\phi 3.2$
	4	出油口径为 $\phi 4.0$ The diameter of the outlet pipe is $\phi 4.0$
出油口数 Quantity of oil outlets		

*型号规格表示方法:
例1 BFF-053表示BFF型5口分配器,出油口径 $\phi 3.2$;
例2 BFF-074表示BFF型7口分配器,出油口径 $\phi 4.2$ 。
*Model specifications are expressed as follows:
Example 1: BFF-053 is a BFF type 5-port distributor with $\phi 3.2$ outlet pipe diameter.
Example 2: BFF-074 is a BFF type 7-port distributor with $\phi 4.2$ outlet pipe diameter.

功能和特点 Functions and features

- BFF型高压分配器适用于容积式润滑系统,该系统由HLC润滑泵站相关连接件等部件组成;
- 由润滑泵输送的压力润滑油推动分配器内设结构,强制将定量的润滑油排出,能精确地将润滑油分配到各个润滑点;
- 高压分配器是加压式的系统,加压出油,卸压储油;
- 每次出油量可在不必停止系统工作的情况下调节出油量小;
- 适用于润滑点多、管路远(高)、给油量要求准确的大、中型机械配套的润滑系统;
- BFF type high pressure distributor is suitable for volumetric lubrication system, the system consists of HLC lubrication pump station related connectors and other components.
- The pressure lubricant delivered by the lubrication pump pushes the inner structure of the distributor, forcing the quantitative lubricant to be discharged, and accurately distributing the lubricant to each lubrication point; the high pressure distributor is a pressurized system, with pressurized oil discharge and unpressurized storage.
- High-pressure distributor is a pressurized system, pressurized oil, unpressurized oil storage.
- The quantity of oil discharged each time can be adjusted without stopping the work of the system; small quantity of oil discharged.
- Suitable for lubrication points, piping far (high), oil supply requires accurate large and medium-sized machinery supporting the design and manufacture of lubrication systems.

产品使用参数 Product usage parameters

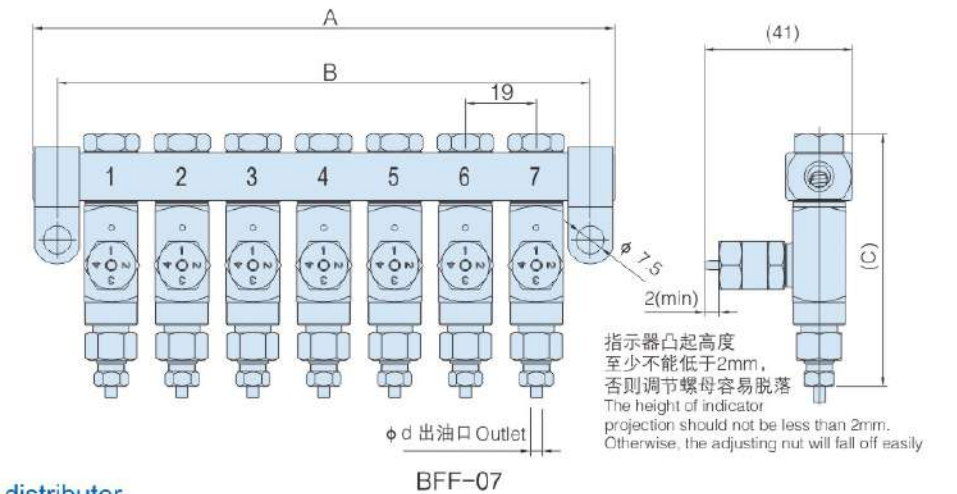
- 使用介质: 润滑油32-320cSt;
- 最小开启压力: 4.0MPa;
- 排量: 最小0.03mL/cy, 最大0.09mL/cy,调整一圈油量为0.03mL,最多允许调整2圈,指示器凸起高度 $\geq 2\text{mm}$;
- 适用环境温度: -15°C 至 90°C
- Using medium: lubrication oil 32-320cSt;
- Minimum Opening Pressure: 4.0MPa;
- Displacement: minimum 0.03mL/cy, maximum 0.09mL/cy, adjust a circle of oil volume of 0.03mL, allows no more than 2 circles of adjustment, the height of the indicator raised $\geq 2\text{mm}$;
- Applicable ambient temperature: -15°C to 90°C

规格型号及技术参数: Models, specifications and technical parameters

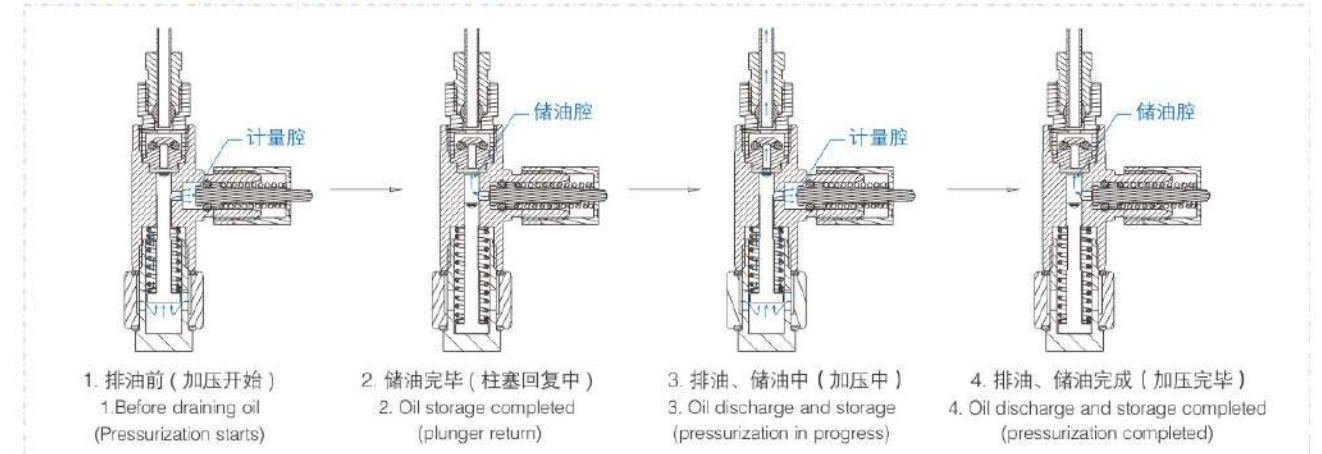
型号规格 Models and specifications	吐油量 Throughput (mL/cy)	出油口径 Outlet oil pipe diameter d(mm)	工作压力 work pressure (MPa)	适用油品粘度 Applicable oil Viscosity (cSt)	出油口数 Outlet quantity	A(mm)	B(mm)	C(mm)	
BFF-013	0.03-0.09	3.2	4-8	32-320	1	42	29	68	
BFF-023					2	61	48		
BFF-033					3	80	67		
BFF-043					4	99	86		
BFF-053					5	118	105		
BFF-063					6	137	124		
BFF-073					7	156	143		
BFF-014		4.0			4.0	1	42	29	68
BFF-024						2	61	48	
BFF-034						3	80	67	
BFF-044						4	99	86	
BFF-054						5	118	105	
BFF-064						6	137	124	
BFF-074						7	156	143	

容积式稀油分配器 Volumetric thin oil distributor

产品外形尺寸图 Product dimensions figure



BFF 分配器工作原理图 Schematic diagram of the BFF distributor



BFF 分配器工作原理说明 Rationale of the BFF distributor

- 从润滑泵中压送出来的润滑油, 润滑油压力使分配器中的柱塞开始往上推动, 润滑油通过柱塞与壳体内孔的间隙将润滑油供给到计量腔内, 油压使计量腔内的指示器往右移动, 计量腔储油完成。
- 当润滑泵停止供油时, 其卸压阀自动开启, 使主油管内润滑油通过卸压阀回油, 此时系统压力下降, 柱塞在弹簧力作用下复位到原位, 指在弹簧力作用下将计量室内存储的润滑油排出到储油腔, 储油完成。
- 润滑泵再次开启加压时, 油压将柱塞推动, 迫使储油腔内的润滑油通过止逆阀排出, 排油完毕。同时在排油的过程中, 润滑油通过柱塞与壳体内孔的间隙将润滑油供给到计量腔内, 油压使计量腔内的指示器往右移动, 计量腔储油完成。
- 润滑泵停止供油时, 卸压阀自动开启, 使主油管内润滑油通过卸压阀回油, 系统压力下降, 柱塞在弹簧力作用下复位到原位, 指在弹簧力作用下将计量室内存储的润滑油排出到储油腔, 储油完成。分配器循环往复工作实现排油、储油。
- The lubricant is pressed out from the oil pump, and the lubricant pressure makes the plunger in the distributor start to push upward, and the lubricant is supplied to the metering cavity through the gap between the plunger and the inner hole of the shell, and the oil pressure makes the indicator in the metering cavity move to the right, and the metering cavity is completed with oil storage.
- When the oil pump stops supplying oil, the pressure relief valve opens automatically, so that the lubricant in the main oil pipe returns to the oil through the pressure relief valve, at this time the system pressure decrease, the plunger resets to the original position under the action of the spring force, and the indicator is discharged to the oil storage chamber under the action of the spring force to store the lubricant in the metering chamber, and the oil storage is completed.
- When the oil pump is turned on again and pressurized, the oil pressure will push the plunger, forcing the lubricant in the oil storage chamber to be discharged through the non-return valve, and the oil discharge is completed. At the same time in the process of discharging oil, lubrication oil through the gap between the plunger and the housing bore will be supplied to the metering cavity, oil pressure to make the metering cavity indicator to move to the right, metering cavity oil storage is complete.
- When the oil pump stops supplying oil, the unloading valve opens automatically, so that the lubricant in the main oil pipe returns to the oil through the unloading valve, the system pressure decrease, the plunger resets to the original position under the action of the spring force, and the indicator in the metering chamber is discharged to the storage cavity under the action of the spring force, and the oil storage is completed. The dispenser works cyclically to realize oil discharge and oil storage.



Resistance-type centralized thin oil lubrication system

抵抗式集中稀油润滑系统

抵抗式集中稀油润滑系统概述 Description of the Resistance-type centralized thin oil lubrication system

抵抗式润滑系统由抵抗式润滑泵、过滤器、BSD/BSE/BSA/CZB等直通式分油块、比例接头、铜接头、油管等组成。可按各个润滑点油量不同，选择不同规格的比例接头。由润滑泵定时定量的供应润滑油，通过比例接头控制油量对各个润滑点进行润滑，使整个系统各点的供油量与各点需油量保持平衡。

The resistant lubrication system is composed of resistant lubrication machine, filter, BSD/BSE/BSA/CZB and other straight-through oil distribution blocks, proportional joints, copper joints, oil pipes, etc. Proportional joints of different specifications can be selected according to the amount of oil required by each lubrication point. Lubrication oil is supplied regularly by the lubrication machine, and lubrication points are lubricated by control the amount of oil through proportional joints, so that the oil supply at each point of the entire system and the oil demand at each point are kept in balance.

1 系统特点:

- 可稳定地将润滑油输送到每个润滑点。
- 具有止逆功能，可防止润滑油回流。
- 出油量会因油品、压力、温度变化而产生变化。

2 系统配置注意事项:

- 在抵抗式润滑系统中，一组比例接头只能对应一个润滑点，比例接头输出油后严禁再进行多点分流。
- 在整个抵抗式润滑系统中，必须每个润滑点都安装比例接头，严禁有个别润滑点不通过比例接头，进行直通式润滑。这样会使管路压力失衡，导致比例接头的润滑点无法正常供油。因为比例接头具有开启阻力和单向止逆阻力。
- 比例接头严禁有串联使用现象。

System characteristics:

- Convey the lubricant to each lubrication point stably.
- The check function is enabled to prevent back flow of lubricant.
- The delivered oil volume is changed due to changes of oil variety, pressure and temperature.

Notices for system configurations:

- Of the resistant lubrication system, a set of proportion joint matches one lubrication point, and multi-point diversion is not permitted after oil is delivered by the proportional joint.
- Of the entire resistant lubrication system, each lubrication point must be installed with a proportion joint, and lubrication points directly lubricated without proportional joint are not allowed, which may cause imbalance in the pipeline pressure and failure of oil supply through the lubrication point using the proportional joint, for the proportional joint has opening resistance and one-way check resistance.
- The proportional joint cannot be used in series connection.

3 系统安装注意事项:

- 各连接管口裁剪平整，确保连接完好不漏油，否则会导致管路无法聚压，使分配器无法正常出油。
- 安装时保证各管路内部清洁。
- 请用正规洁净新润滑油，最佳适用黏度ISO VG32~250。
- 适用温度-10~50℃
- 注意使用环境变化，适当调整使用油品黏度。
- 比例接头的出油方向不可装反

Attentions for installation of the system:

- The connecting oil pipe shall be cut in order to ensure that oil will not leak. Otherwise, the pipeline accumulate pressure and the distributor cannot deliver oil as usual.
- When installed, interior of the pipeline shall be clean.
- Please use certified lubricant for cleaning, and the optimum applicable viscosity is ISO VG32~250.
- Applicable temperature -10~50°C.
- Please notice changes of environment, and adjust oil viscosity.
- Oil delivery of the proportional joint cannot be installed reversely.

4 基本适用范围

- 活塞泵类：适用于注油管长5米内，高3米内，润滑点在30个点以内的中小型机械设备。
- 齿轮泵类（间歇型）：适用于注油管长25米内，润滑点在20个点以内，润滑点较多的各类机械设备。
- 齿轮泵类（连续型）：适用于注油管长25米内，润滑点在30个点以内，润滑点较多的各类机械设备。

Basic scope of application:

- Piston pump: applicable for medium and small-sized machinery with oil injection pipeline of maximum 5 meters, height of 3 meters and lubrication points of maximum 30 points.
- Gear pump types (intermittent): applicable for various kinds of machinery with main oil pipeline of maximum 25 meters, lubrication points of maximum 20 points.
- The gear pump types (continuous): applicable for various machinery and equipment with main oil pipe of maximum 25 meters, lubrication points of maximum 30 points.

BTA-A1 型(Type)

数显稀油润滑泵 Thin oil lubrication pump with digital display

间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

Φ6 (主出油口)
Φ6 (Main oil outlet)
(套管帽 M10x1.0)
(Sleeve tube cap M10x1.0)
泵体螺纹 PT1/8
Pump body thread PT1/8

电缆接头
Cable wiring joint

订货编制说明 Order description

BTA-A1 □ □ - □ □ □ □ □ □

压力开关 Pressure switch		油箱 Oil tank
P	压力开关★ Pressure switch	空白 树脂油箱 ★ Blank Resin oil tank
空白	无 Blank None	A 金属油箱不带回油装置 Metal oil tank without oil return device
		H 金属油箱带回油装置 Metal oil tank with oil return device
油箱容积 Oil tank volume		液位开关 Liquid level switch
2	2L ★	W 无液位开关 Without level monitor
3	3L ★	空白 有液位开关 ★ Blank with level monitor
4	4L ★	
6	6L	出油口径 Outlet pipe diameter
8	8L	4 接Φ4管 Connected to Φ4 pipe
		6 接Φ6管 Connected to Φ6 pipe ★
电压 Voltage type		吐油量 Throughput
1	交流 110VAC, 50/60Hz	2 200mL/min ★
2	交流 220VAC, 50/60Hz ★	

注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能,可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警,并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定,“LUB”润滑时间: 1-999(秒) “INT”间歇时间: 1-999(分)(特殊要求可定制)
- 面板指示灯可显示出润滑泵的润滑和间歇状态。
- 系统可使用“RST”键,强制润滑或消除异常报警信号。
- 单次最长润滑时间≤2min,间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能,防止电机温度过高及过载。
- 在抵抗式系统中无脱压装置,需配合比例接头分配器使用(参考42-44页)。
- 设有溢流阀,可保护润滑泵及管路由于压力过高而损坏。

Performance and characteristics

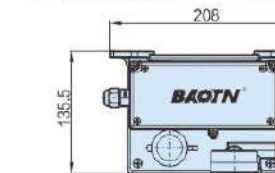
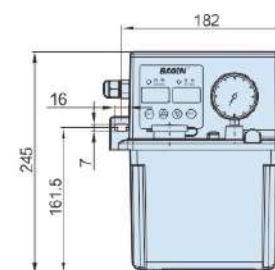
- The system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed(Time unit convertible).
 - Memory: in case of power on after power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds) INT intermittent time: 1-999 (minutes) (Tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Single maximum lubrication time ≤ 2 min, and intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection function to avoid high motor temperature and overload.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42-44).
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

规格型号及技术参数 Specifications, models and technical parameters

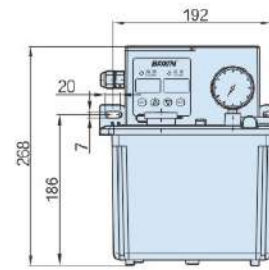
项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐油量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTA-A1	AC110 or AC220	20	1-999	1.0	2.5	200	Φ4 or Φ6	可选配 Optional	有 Yes	有 Yes		2(树脂 Resin)	2.90
												3(树脂 Resin)	3.20
												4(树脂 Resin)	3.30
												4(钣金 Metal plate)	5.70
												6(钣金 Metal plate)	6.00
												8(钣金 Metal plate)	6.50



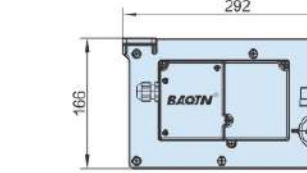
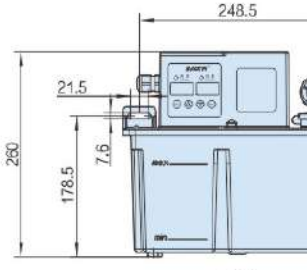
BTA-A12 (树脂油箱 Resin oil tank)



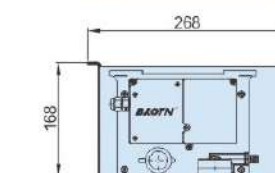
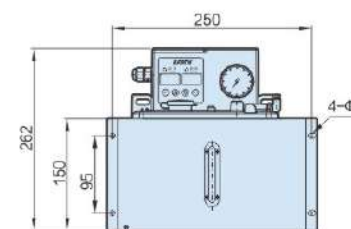
BTA-A13 (树脂油箱 Resin oil tank)



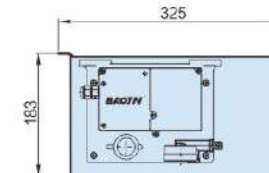
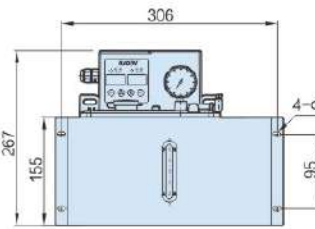
BTA-A14 (树脂油箱 Resin oil tank)



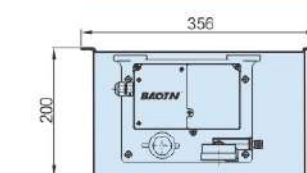
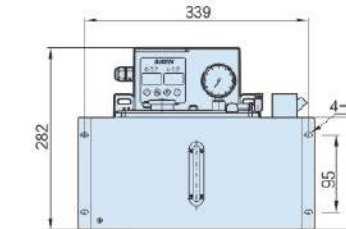
BTA-A14 (钣金油箱 Sheet metal oil tank)



BTA-A16 (钣金油箱 Sheet metal oil tank)



BTA-A18 (钣金油箱 Sheet metal oil tank)



BTA-C1型(Type)

PLC控制稀油润滑泵 PLC control thin oil lubrication pump

■ 间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description

BTA-C1 □ □ - □ □ □ □ □ □

压力开关 Pressure switch	
P	压力开关★ Pressure switch
空白	无 None

油箱容积 Oil tank volume	
2	2L ★
3	3L ★
4	4L ★
6	6L
8	8L

电压 Voltage type	
1	交流 110VAC, 50/60Hz
2	交流 220VAC, 50/60Hz ★

油箱 Oil tank	
空白	树脂油箱 ★ Resin oil tank
A	金属油箱不带回油装置 Metal oil tank without oil return device
H	金属油箱带回油装置 Metal oil tank with oil return device

液位开关 Liquid level switch	
D	上通电 ★ Normal Close
空白	下通电 ★ Normal Open

出油口径 Outlet pipe diameter	
4	接Φ4管 Connected to Φ4 pipe
6	接Φ6管 Connected to Φ6 pipe ★

吐出量 Throughput	
2	200mL/min ★



注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 设有液位开关、压力开关(可选配)。当油量或压力不足时可将异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有"FEED"键,可强制润滑。
- 时间设定:单次最长润滑时间≤2min,间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能,防止电机温度过高及过载。
- 抵抗系统中无脱压装置,需配合比例接头分配器使用(参考42~44页)。
- 设有溢流阀,可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏IC板和电机。

Performance and characteristics

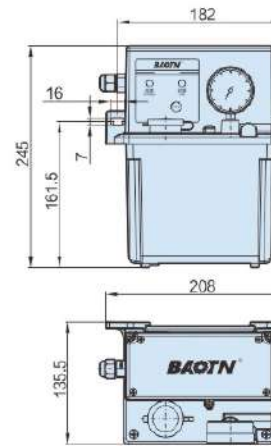
- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- Time setting: single maximum lubrication duration ≤ 2min, and the intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42~44).
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

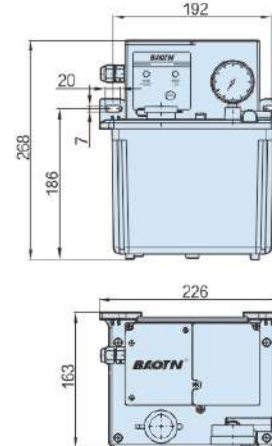
项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐出量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTA-C1	AC110 or AC220	20	由外部 PLC 控制 Controlled by an external PLC		1.0	2.5	200	Φ 4 or Φ 6	可选配 Optional	上通电或下通电 Power supply at upper or lower position	无 No	2(树脂 Resin)	2.90
		3(树脂 Resin)										3.20	
		4(树脂 Resin)										3.30	
		4(钣金 Metal plate)										5.70	
		6(钣金 Metal plate)										6.00	
		8(钣金 Metal plate)										6.50	



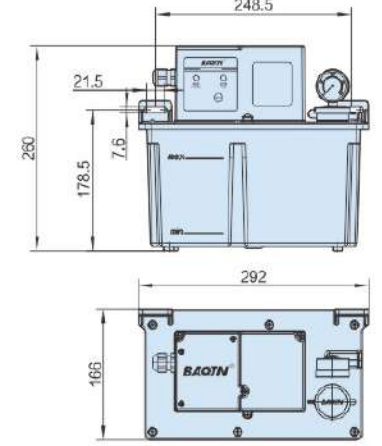
BTA-C12
(树脂油箱 Resin oil tank)



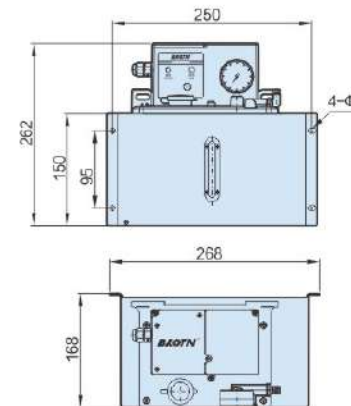
BTA-C13
(树脂油箱 Resin oil tank)



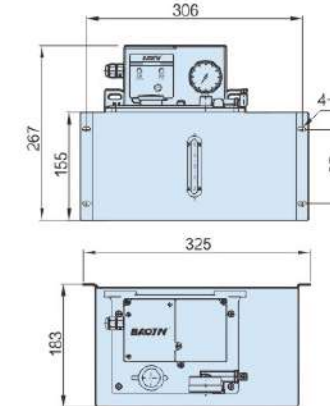
BTA-C14
(树脂油箱 Resin oil tank)



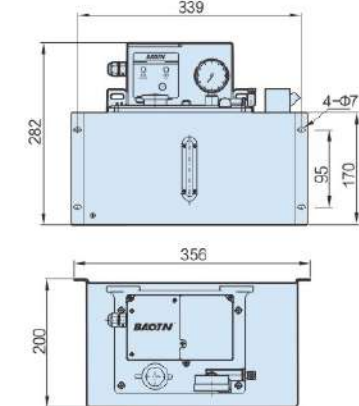
BTA-C14
(钣金油箱 Sheet metal oil tank)



BTA-C16
(钣金油箱 Sheet metal oil tank)



BTA-C18
(钣金油箱 Sheet metal oil tank)

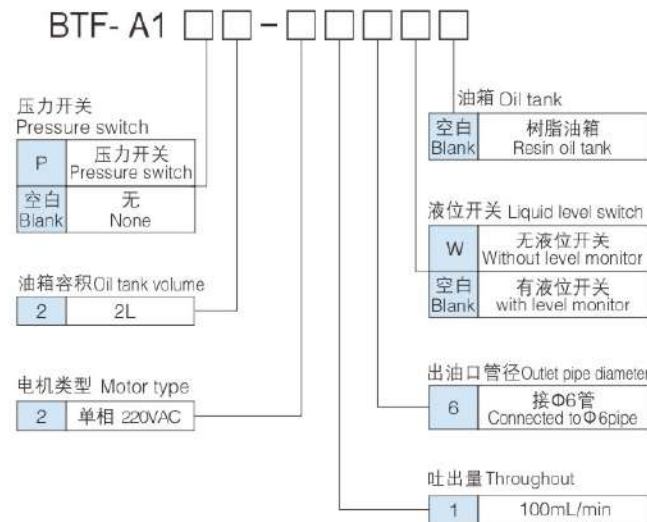


BTF-A1 型(Type)

数显稀油润滑泵 Thin oil lubrication pump with digital display



订货编制说明 Order description



Performance and characteristics

- The Digital display system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed (Time unit convertible).
 - Memory: in case of power on after power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds) INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Single maximum lubrication time ≤ 2 min, and intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection function to avoid high motor temperature and overload.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42-44).
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

性能与特点

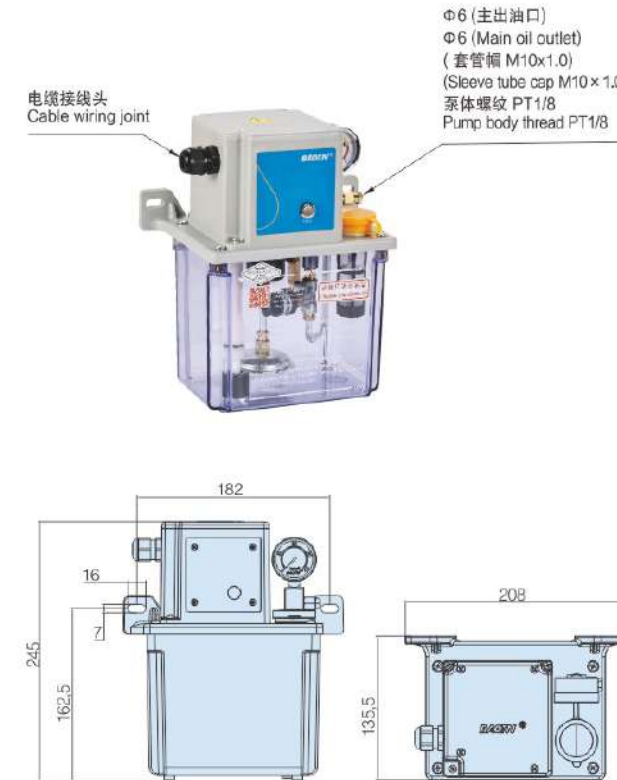
- 数显控制系统可设定三种动作模式。
 - 润滑: 开机时先执行润滑时间计时。
 - 间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警, 并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定, "LUB"润滑时间: 1-999(秒) "INT"间歇时间: 1-999(分)(特殊要求可定制)
- 面板指示灯可显示出润滑泵的润滑和间歇状态。
- 系统可使用复位键, 强制润滑或消除异常报警信号。
- 单次最长润滑时间 ≤ 2min, 间歇时间通常为润滑时间的5倍以上。
- 电机设有自我保护功能, 防止电机温度过高及过载。
- 抵抗式系统中无脱压装置, 需配合比例接头分配器使用(参考42-44页)。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。

规格型号及技术参数 Specifications, models and technical parameters

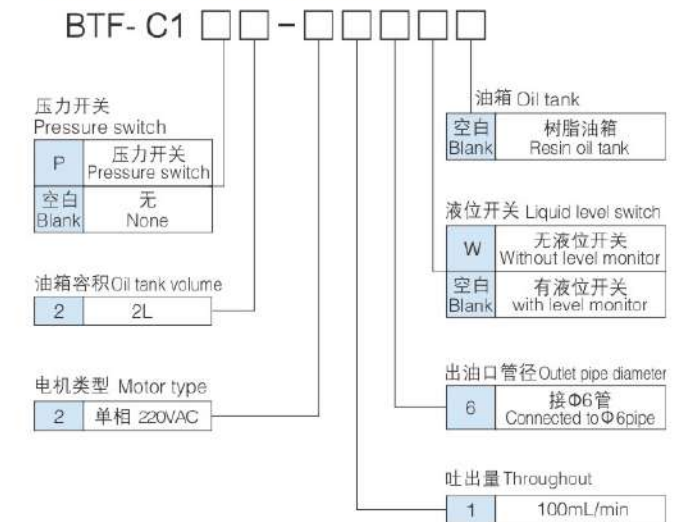
项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐油量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 voltage (V)	输出功率 output power (W)											
BTF-A1	AC220	18	1-999		1.0	2.5	100	Φ 6	可选配 Optional	有 Yes	有 Yes	2(树脂 Resin)	2.4

BTF-C1 型(Type)

PLC 控制稀油润滑泵 PLC control thin oil lubrication pump



订货编制说明 Order description



Performance and characteristics

性能与特点

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- Time setting: single maximum lubrication duration ≤ 2min, and the intermittent time is at least 5 times of the lubrication time.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42-44).
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

项目 Item 型号规格 Models and specifications	电机 Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure	吐油量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 voltage (V)	输出功率 output power (W)											
BTF-C1	AC220	18	由外部 PLC 控制 Controlled by an external PLC		1.0	2.5	100	Φ 6	可选配 Optional	有 Yes	无 No	2(树脂 Resin)	2.4

BTB-A1型(Type)

数显稀油润滑泵 Thin oil lubrication pump with digital display

间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description

BTB-A1□□-□□□□□□

压力开关 Pressure switch		油箱 Oil tank	
P	压力开关★ Pressure switch	空白	树脂油箱★ Resin oil tank
空白	无 None	A	金属油箱不带回油装置 Metal oil tank without oil return device
油箱容积 Oil tank volume		H	金属油箱带回油装置 Metal oil tank with oil return device
3	3L★	液位开关 Liquid level switch	
4	4L★	W	无液位开关 Without level monitor
6	6L★	空白	有液位开关★ with level monitor
8	8L★	出口管径 Outlet pipe diameter	
电压 Voltage type		4	接Φ4管 Connected to Φ4 pipe
1	交流 110VAC,50/60Hz	6	接Φ6管 Connected to Φ6 pipe★
2	交流 220VAC,50/60Hz★	吐出量 Throughput	
9	直流 24VDC	2	200mL/min★
吐出量 Throughput		3	300mL/min



注：★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 系统可设定三种动作模式。
 - 润滑：开机时先执行润滑时间计时。
 - 间歇：润滑完成后执行间歇时间计时(时间单位可转换)。
 - 记忆：断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能，可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警、并将异常信号输出。
 - 压力不足显示Erp。
 - 液位不足显示Ero。
- 系统时间可设定，“LUB”润滑时间：1-999(秒)，“INT”间歇时间：1-999(分)(特殊要求可定制)
- 面板指示灯可显示出润滑泵的润滑和间歇状态。
- 系统可使用“RST”键强制润滑或消除异常报警信号。
- 抵抗式系统中无脱压装置，需配合比例接头分配器使用(参考42~44页)。
- 设有溢流阀，可保护润滑泵及管路由于压力过高而损坏。

Performance and characteristics

- The system is configured with 3 action modes.
 - lubrication: when turning on, execute lubrication timing.
 - Intermittent: execute intermittent timing after lubrication is completed(time unit converted).
 - Memory: in case of power on after power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - When pressure is insufficient, Erp is displayed.
 - When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1-999 (seconds) INT intermittent time: 1-999 (minutes) (tailored if specially required)
- The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42~44).
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

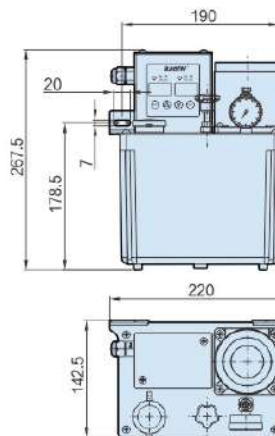
规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=5min)
(Work system S2=5min)

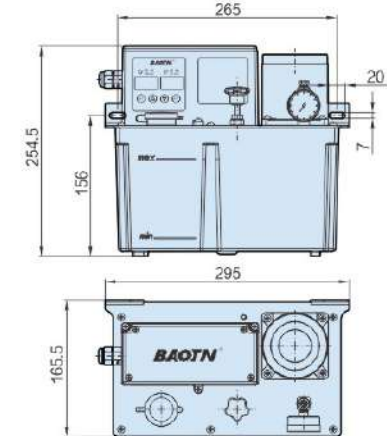
项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 voltage (V)	输出功率 output power (W)											
BTB-A1	单相 1-phase	AC110/ AC220	25	1-999	1.0	3.5	200 300	Φ4 or Φ6	可选配 Optional	有 Yes	有 Yes	3(树脂 Resin)	4.2
	直流 Direct current	DC24	40									4(树脂 Resin)	4.5
												6(钣金 Metal plate)	6.4
												8(钣金 Metal plate)	10.0



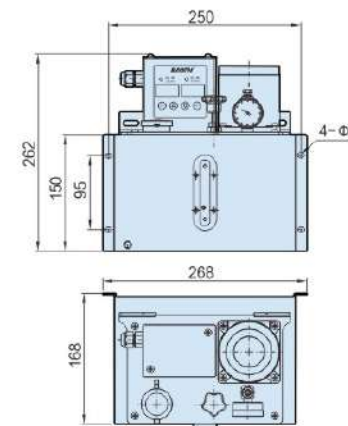
BTB-A13
(树脂油箱 Resin oil tank)



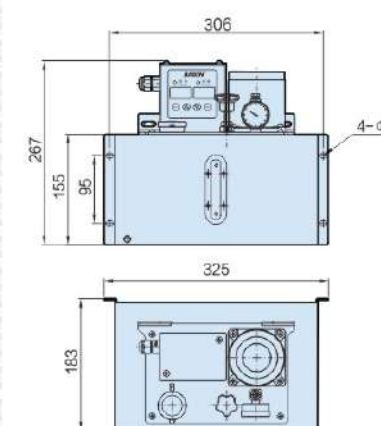
BTB-A14
(树脂油箱 Resin oil tank)



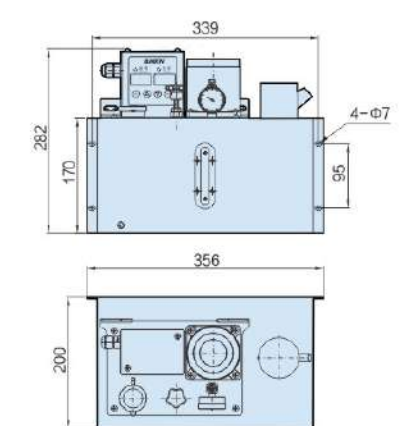
BTB-A14
(钣金油箱 Sheet metal oil tank)



BTB-A16
(钣金油箱 Sheet metal oil tank)



BTB-A18
(钣金油箱 Sheet metal oil tank)



BTB-C1 型 (Type)

PLC 控制稀油润滑泵 PLC control thin oil lubrication pump

间歇型电动稀油润滑泵 (齿轮泵) Intermittent electric thin oil lubrication pump (gear pump)

订货编制说明 Order description

BTB-C1 □ □ - □ □ □ □ □ □

压力开关
Pressure switch

P	压力开关★ Pressure switch
空白 Blank	无 None

油箱容积 Oil tank volume

3	3L ★
4	4L ★
6	6L ★
8	8L ★

电压 Voltage type

1	交流 110VAC, 50/60Hz
2	交流 220VAC, 50/60Hz ★
9	直流 24VDC

吐油量 Throughput

2	200mL/min ★
3	300mL/min

油箱
Oil tank

空白 Blank	树脂油箱 Resin oil tank ★
A	金属油箱不带回油装置 Metal oil tank without oil return device
H	金属油箱带回油装置 Metal oil tank with oil return device

液位开关 Liquid level switch

D	上通电★ Normal Close
空白 Blank	下通电★ Normal Open

出口管径 Outlet pipe diameter

4	接Φ4管 Connected to Φ4 pipe
6	接Φ6管 Connected to Φ6 pipe ★

电缆接头
Cable wiring joint



Φ6 (主出口)
Φ6 (Main oil outlet)
(套管帽 M10x1.0)
(Sleeve tube cap M10x1.0)

注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 设有液位开关、压力开关 (可选配)。当油量或压力不足时可发出异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。
- 系统中设有“FEED”键, 可强制润滑。
- 抵抗式系统中无脱压装置, 需配合比例接头分配器使用 (参考42~44页)。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏IC板和电机。

Performance and characteristics

- Liquid level switch and pressure switch (optional) are provided. When oil volume or pressure is insufficient, abnormal signal is output.
- The panel indicator light indicates power and lubrication status of the oil injection mold.
- The system is provided with FEED key, and compulsory lubrication is applied.
- No decompression device is provided with resistance-type system, used with proportional joint distributor (Refer to page 42~44).
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

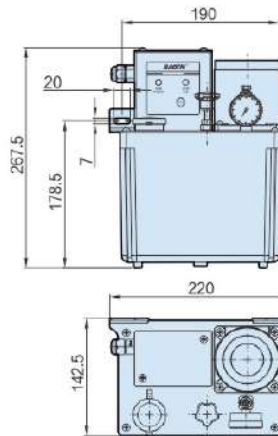
规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=5min)
(Work system S2=5min)

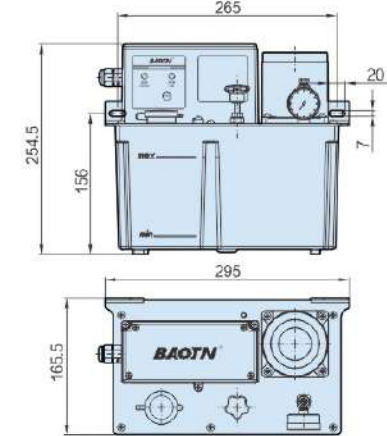
项目 Item	电机 Motor		润滑时间 Lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐油量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	输出功率 Output power (W)											
BTB-C1	单相 1-phase	AC110/ AC220	25	由外部 PLC 控制 Controlled by an external PLC	1.0	3.5	200 300	Φ 4 or Φ 6	可选配 Optional	上通电 或 下通电 Power supply at upper or lower position	无 No	3 (树脂 Resin)	4.2
	直流 Direct current	DC24	40									4 (树脂 Resin)	4.5



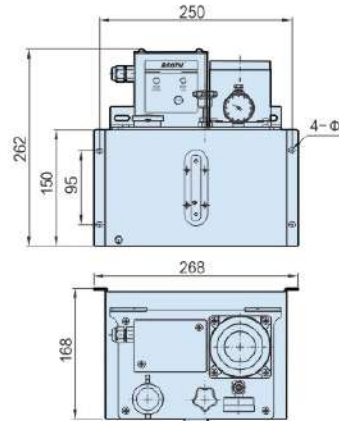
BTB-C13
(树脂油箱 Resin oil tank)



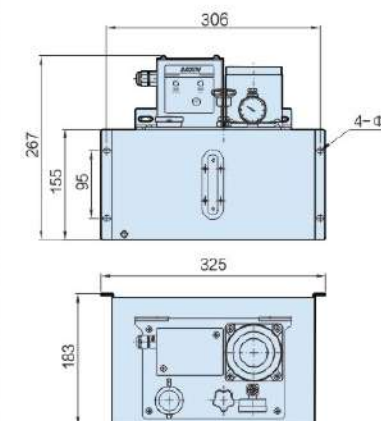
BTB-C14
(树脂油箱 Resin oil tank)



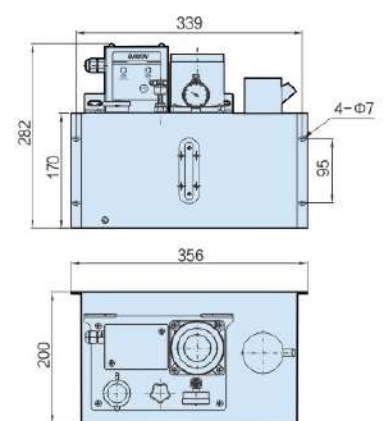
BTB-C14
(钣金油箱 Sheet metal oil tank)



BTB-C16
(钣金油箱 Sheet metal oil tank)



BTB-C18
(钣金油箱 Sheet metal oil tank)



BEA 型(Type)

自动活塞式润滑泵 Automatic piston lubrication pump

自动稀油润滑泵 (活塞泵) Automatic thin oil lubrication pump (piston pump)



订货编制说明 Order description

BEA-□□-□□□□

吐出量 Throughput	6	3~6mL/cy
间歇润滑时间 Intermittent lubrication time	10	10 分钟 Minutes
	15	15 分钟 Minutes
	30	30 分钟 Minutes
	60	60 分钟 Minutes
	120	120 分钟 Minutes
	240	240 分钟 Minutes
	360	360 分钟 Minutes
液位开关 Liquid level switch	空白 Blank	下通电 Lower power supply
	D	上通电 Upper power supply
	W	无液位开关 without level switch
出油口管径 Outlet pipe diameter	4	接φ4管 Connected to φ4 pipe
	6	接φ6管 Connected to φ6 pipe
电机类型 Motor type	1	单相 110V Single phase 110V
	2	单相 220V Single phase 220V

性能与特点

- 此自动活塞式润滑泵，设有液位开关，可将液位异常信号输出。
- 间歇时间在出厂时，可依靠客户的要求设定。
- 吐出油量有两种规格，可在3~6cc范围内调整。
- 机械定时，无需PLC控制，由不同转速的同步电机连续运转，驱动内部蜗轮蜗杆减速，确定供油与间歇周期。
- 设有电机堵转信号开关，可实时监测电机失速异常信号。
- 注意：调试时需手动供油，将手动拉杆至上极限脱手，活塞自行复位，即一次供油完毕。严禁用手按压手动拉杆强制排油，以免损坏泵内部件。
- 在抵抗式系统中无脱压阀装置，需配合比例接头分配器使用（参考42~44页）

Performance and characteristics

- The automatic piston lubrication pump is provided with liquid level switch to output abnormal liquid level signal.
- The intermittent time shall be set according to customers' requirements when delivered.
- There are two specifications for throughput capacities, adjustable within the range of 3~6cc.
- Timing of the machinery is free of PLC control, and operated by synchronous motor of different rotation speed. Worm shaft is located inside for reduction to ensure the oil supply and intermittent cycle.
- Equipped with a motor stall signal switch, it can monitor motor stall abnormal signals in real time.
- Notes: Manual oil supply is required in commissioning. Pull the manual bar to the upper limit position, and then hands off. The piston will recovered automatically. In this way, oil supply is supplied timely. Draining the oil by pressing the manual pull rod with the hands is prohibited to avoid damaging internal parts.
- There is no pressure relief valve device in the resistance system, and it needs to be used with a proportional joint distributor (refer to page 42~44)

规格型号及技术参数 Specifications, models and technical parameters

项目 Item	电机 Motor		(液位开关) Liquid level switch 输出接点容量 Output contact Capacity (A)	间歇时间 Intermittent time (min)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/cy)	出油管径 Outlet oil pipe diameter (mm)	液位开关 Liquid level switch	油箱容量 Oil tank volume (L)	重量 Weight (KG)
	电压 Voltage (V)	功率 Power (W)								
BEA	AC110 or AC220	4.5	0.3	10	0.3	3~6 (可调油) (Adjustable oil)	φ4 or φ6	有 Yes	2 树脂油箱 Resin oil tank	1.65
				15						
				30						
				60						
				120						
				240						
360										

BEB 型(Type)

手拉式润滑泵 Hand-pull lubrication pump

手动稀油润滑泵 (活塞泵) Manual thin oil lubrication pump (piston pump)



订货编制说明 Order description

BEB-□□□□

吐出量 Throughput	8	8 mL/cy
手柄方向 Handle direction	L	左手拉 Left handle *
	R	右手拉 Right handle *
出油口方向 Oil outlet direction	S	上出口 Upper Export
	X	下出口 Below Export *
出油口管径 Oil Outlet pipe diameter	4	接φ4管 Connected to φ4 pipe *
	6	接φ6管 Connected to φ6 pipe *

性能与特点 Performance and characteristics

- 体积小，安装方便、使用简易。防止逆装置避免油回流。适用于对油量要求不严格的润滑场所。适用于润滑系统较简单的机械。油品黏度：20~150cst
- Small volume, easy installation and convenient use. Check device is used to prevent back flow. It is applicable for sites with non-rigorous requirements and machinery with simple lubrication system. Oil product viscosity: 20~150cst.

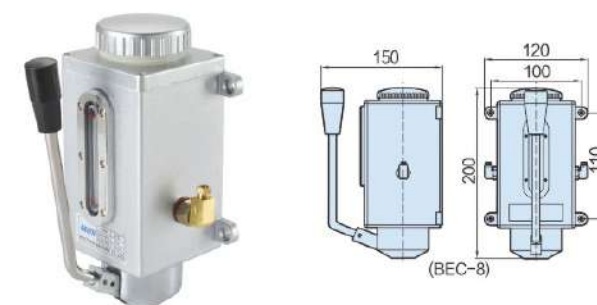
规格型号及技术参数 Specifications, models and technical parameters

项目 Item	最大吐出压力 Maximum throughput pressure (MPa)	吐出量 Throughput volume (mL/cy)	出油口管径 Oil outlet pipe diameter (mm)	油箱容量 Oil tank volume (mL)	出油口方向 Oil outlet direction	重量 Weight (KG)
BEB-8L	0.5	8	φ4 or φ6	600	向左或向右 Left or right	0.9
BEB-8R						

BEC 型(Type)

手摇式润滑泵 Hand-operated lubrication pump

手动稀油润滑泵 (活塞泵) Manual thin oil lubrication pump (piston pump)



订货编制说明 Order description

BEC-□□□□

吐出量 Throughput	8	8 mL/cy
出油口管径 Oil Outlet pipe diameter	4	接φ4管 Connected to φ4 pipe *
	6	接φ6管 Connected to φ6 pipe *
出油口方向 Oil outlet direction	L	左 Left *
	R	右 Right *

性能与特点 Performance and characteristics

- 体积小，安装方便、使用简易。防止逆装置避免油回流。适用于对油量要求不严格的润滑场所。适用于润滑系统较简单的机械。油品黏度：20~150cst
- Small volume, easy installation and convenient use. Check device is used to prevent back flow. It is applicable for sites with non-rigorous requirements and machinery with simple lubrication system. Oil product viscosity: 20~150cst.

规格型号及技术参数 Specifications, models and technical parameters

项目 Item	最大吐出压力 Maximum throughput pressure (MPa)	吐出量 Throughput volume (mL/cy)	出油口管径 Oil outlet pipe diameter (mm)	油箱容量 Oil tank volume (mL)	出油口方向 Oil outlet direction	重量 Weight (KG)
BEC-8	1.5	8	φ4 or φ6	600	左或右 Left or right	0.9

BED 型(Type)

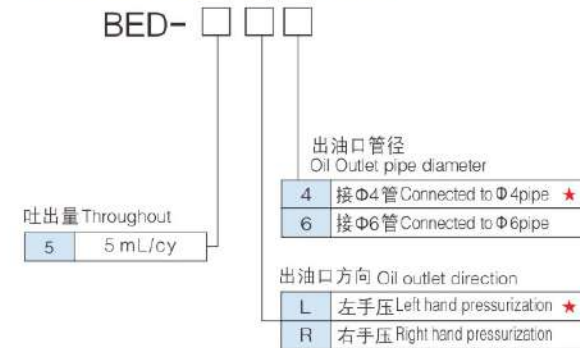
手压式润滑泵 Hand-compression lubrication pump

■ 手动稀油润滑泵 (活塞泵) Manual thin oil lubrication pump (piston pump)

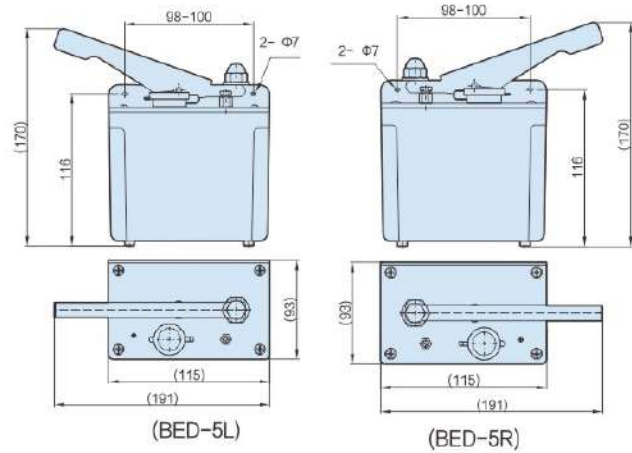


左手压 Left hand pressurization
右手压 Right hand pressurization

订货编制说明 Order description



注: ★表示优选型号
Note: ★ indicates preferred model



性能与特点 Performance and characteristics

- 该泵是活塞泵, 压下手柄时将油吸入活塞腔内, 手柄复位时, 在弹簧力的作用下将活塞管内的油排出, 该泵可与抵抗式分配器组成集中润滑系统, 适用于注油管路长5米、高3米、15个润滑点以内的各项润滑设备。
- The pump is a piston pump. When the handle is pressed down, the oil is sucked into piston cavity. When the handle is recovered, with the function of the spring force, oil in the piston pipe is drained. The pump can form a centralized lubrication system by combining with the resistant distributor, and is applicable for lubrication with length of 15m, height of 3m and with 15 lubrication points.

规格型号及技术参数 Specifications, models and technical parameters

项目 Item	最大吐出压力 Maximum throughput pressure (MPa)	吐出量 Throughput volume (mL/cy)	出油口径 Oil outlet pipe diameter (mm)	手柄形式 Handle form	油箱容量 Oil tank volume (mL)	重量 Weight (KG)
BED-5L	0.4	3 ~ 5 (油量可调) (Adjustable oil)	Φ 4 or Φ 6	左手压 Left hand pressurization	500	0.7
BED-5R				右手压 Right hand pressurization		

备注: 以安装孔为基准面确定方向, 手柄在左为“左手压”, 反之为“右手压”。
Notes: Determine the direction with the mounting hole as the reference surface. The handle is "left hand pressure" on the left and "right hand pressure" on the left.

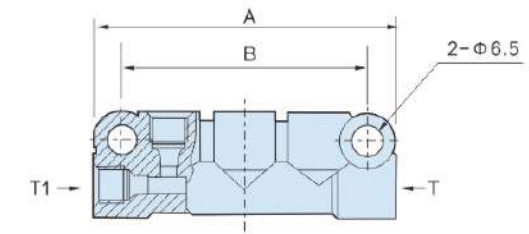
BSD 型(Type)

稀油抵抗式分配器 Resistance oil distributor

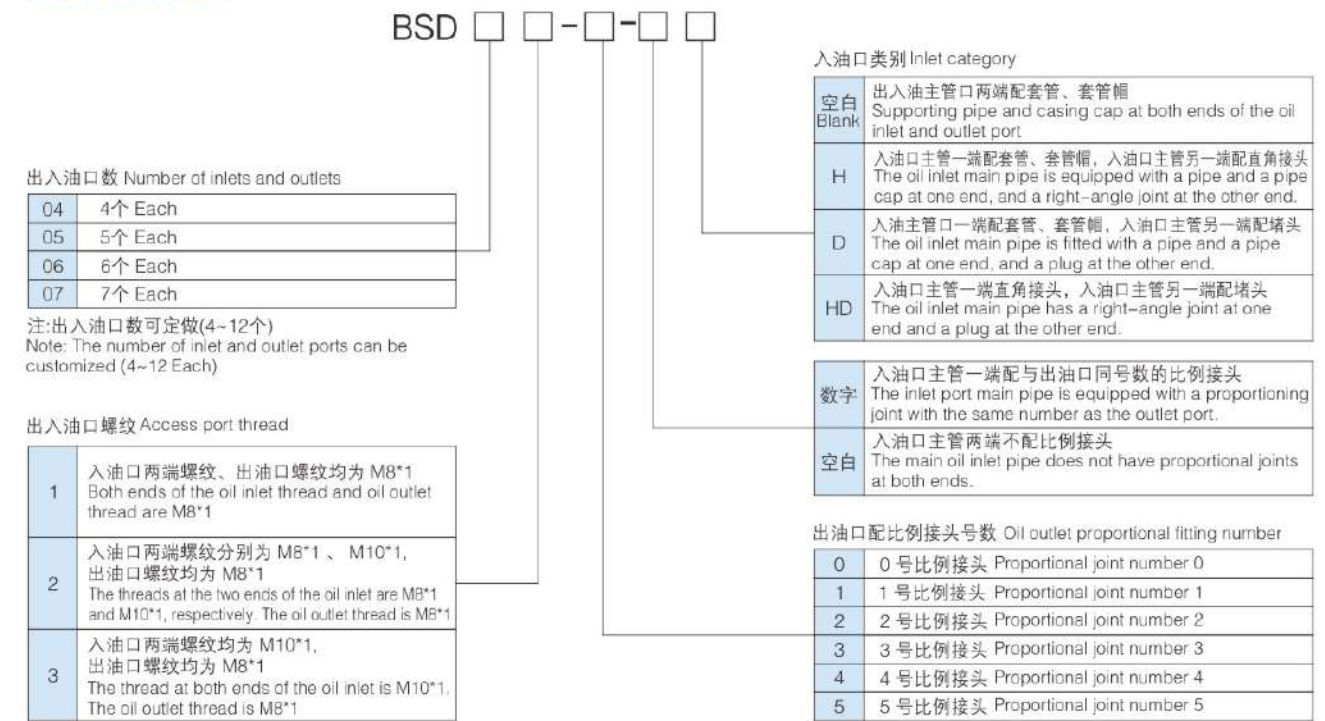
■ 分配器组件 Dispenser assembly



BSD-07



订货编制说明 Order description



*BSD配BSA比例接头
* BSD with BSA proportional connector

型号 Model	T/T1	出口数 Export volume	A	B
BSD041	φ4/φ4	2	48	35
BSD042	φ4/φ6			
BSD043	φ6/φ6			
BSD051	φ4/φ4	3	64	54
BSD052	φ4/φ6			
BSD053	φ6/φ6			
BSD061	φ4/φ4	4	80	67
BSD062	φ4/φ6			
BSD063	φ6/φ6			
BSD071	φ4/φ4	5	96	83
BSD072	φ4/φ6			
BSD073	φ6/φ6			

型号 Model	T/T1	出口数 Export volume	A	B
BSD081	φ4/φ4	6	112	99
BSD082	φ4/φ6			
BSD083	φ6/φ6			
BSD091	φ4/φ4	7	128	115
BSD092	φ4/φ6			
BSD093	φ6/φ6			
BSD101	φ4/φ4	8	144	131
BSD102	φ4/φ6			
BSD103	φ6/φ6			
BSD121	φ4/φ4	10	176	165
BSD122	φ4/φ6			
BSD123	φ6/φ6			

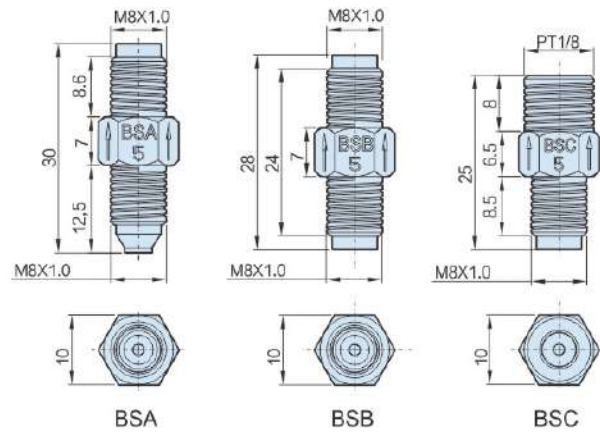
BSA/BSB/BSC 型(Type)

稀油比例接头 Thin oil proportional joint



BSA 型(Model) BSB 型(Model) BSC 型(Model)

产品外形尺寸图 Product dimension figure



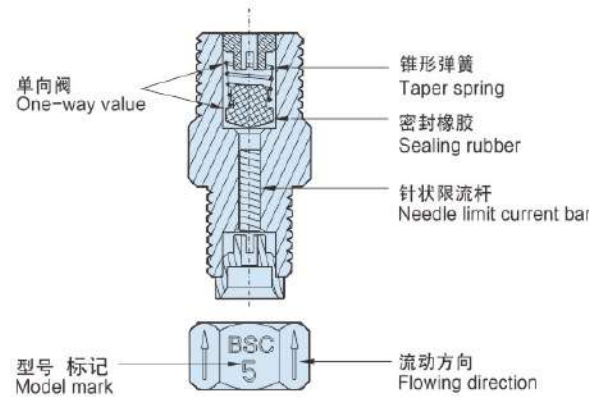
备注：以上比例接头，进油口管径均为 $\phi 4$ 。
Remarks: the above proportional joints and oil inlet and outlet port diameters are $\phi 4$.

规格型号及技术参数 Specifications, models and technical parameters

型号规格 Models and specifications	标记 Marks	流量比例系数 Flow Coefficient	联接方式 Connecting mode
BSA-0	BSA 0	1.8	进油口方向与 CZA 连接体连接。出油口方向与 (套管 JQC-BB04) 和 (螺帽 JQC-BP04) 连接。(常用于支路前端) The oil inlet is connected to the CZA connector. The oil outlet is connected to screw cap JQC-BP04 with the sleeve pipe (sleeve pipe JQC-BB04).
BSA-1	BSA 1	3.8	
BSA-2	BSA 2	6	
BSA-3	BSA 3	12	
BSA-4	BSA 4	18	
BSA-5	BSA 5	22	

备注：比例接头测试基于 ISO VG46# 润滑油在室温条件下，10bar 工作压力下的测试流量 mL/min
Note: The proportional joint test is based on the test flow rate mL/min of ISO VG46 # lubrication oil at room temperature and a working pressure of 10 bar

工作原理图 Schematic diagram



装配示意图 Assembly diagram



规格型号及技术参数 Specifications, models and technical parameters

型号规格 Models and specifications	标记 Marks	流量系数 Flow Coefficient	联接方式 Connecting mode
BSB-0	BSB 0	1.8	两端分别与 (套管 JQC-BB04) 和 (螺帽 JQC-BP04) 连接。(常用于支路中端) Both ends are connected to sleeve pipe JQC-BB04 and screw cap JQC-BP04 (usually used at middle end of the branch).
BSB-1	BSB 1	3.8	
BSB-2	BSB 2	6	
BSB-3	BSB 3	12	
BSB-4	BSB 4	18	
BSB-5	BSB 5	22	

型号规格 Models and specifications	标记 Marks	流量系数 Flow Coefficient	联接方式 Connecting mode
BSC-0	BSC 0	1.8	进油口方向与 (套管 JQC-BB04) 和 (螺帽 JQC-BP04) 连接。出油口端与设备润滑点连接。(常用于支路末端) The oil inlet is connected to sleeve pipe JQC-BB04 and screw cap JQC-BP04. The oil outlet is connected to equipment lubrication point (usually used at the end of the branch).
BSC-1	BSC 1	3.8	
BSC-2	BSC 2	6	
BSC-3	BSC 3	12	
BSC-4	BSC 4	18	
BSC-5	BSC 5	22	

性能与特点 Performance and characteristics

- BSA/BSB/BSC型抵抗式计量件又称比例接头
- 管式结构，内设有限流杆和单向阀。
- 开启压力：0.2MPa
- 通过节流原理控制流量，按流通能力(流量定数)对流量进行比例分配。同型号计量件在润滑系统中相互间距离的远、近、高、低、卧装或立装均在实际使用中其出油量基本相等。使用寿命长，比例接头单向阀其橡胶密封件外部衬压铜套(除密封面外)防止橡胶密封件膨胀和老化。
- 动作灵敏，排油畅通：比例接头单向阀采用锥形弹簧，确保计量件动作敏捷与排油畅通，并防止排出的油剂逆流。
- 流量比：同一型号的流量在实际使用过程中会由环境温度的变化和油的黏度不同而发生变化。
- 适用油品粘度：ISO VG32~220。
- 适用环境温度：-10℃至50℃。
- BSA/BSB/BSC resistant measurement device is called proportional joint.
- Pipe structure: built-in flow limit bar and one-way valve.
- Opening pressure: 0.2MPa
- Flow is controlled by the principle of throttling, and distributed according to flowing capacity (flow constant). Meanwhile, the measurement device in the lubrication system with near, distant, high, low, horizontal or vertical installation have identical outlet flow. With long service life, the rubber sealing parts of the proportional one-way joint is coated with copper sleeve (except sealing face) to prevent expansion and aging of rubber sealing parts.
- Sensitive action and smooth oil drain: taper spring is used for one-way valve with proportional joint to ensure that action of the measurement device is agile and smooth to prevent reverse flow of oil.
- Flow ratio: flow of the same model shall be changed with change of environmental temperature and oil viscosity in use.
- Applicable oil viscosity: ISO VG32~220.
- Applicable ambient temperature: -10℃ to 50℃.



Volumetric centralized grease lubrication system

容积式集中油脂润滑系统



容积式集中油脂润滑系统概述 Description of the Volumetric centralized grease lubrication system

容积式油脂润滑系统由油脂滤油器、容积式油脂润滑泵、直通式分油块、容积式油脂分配器、铜接头、油管等配件组成，此润滑系统包括“脱压式定量出油”和“加压式定量出油”两种形式。

The Volumetric grease lubrication system is lubricated by grease oil filter, positive displacement oil pump, straight through the oil, positive displacement oil distributor, copper fittings, tubing and other accessories, the lubrication system includes quantitative oil "to take off the pressure type" and "pressure quantitative oil" two forms.

1 脱压定量出油工作原理

容积式润滑泵工作时，先将润滑油输送到(GFA/GFB型)容积式分配器中，当容积式分配器内储满油后，润滑泵停止工作，同时自动脱压，分配器内的弹簧推动内部活塞，将定量好的润滑油输送到各润滑部位。

2 加压定量出油工作原理

容积式润滑泵工作时，通过输送的压力油推动(GFD/GFE型)容积式分配器内部活塞，将容积式分配器内已定量好的润滑油强制性输送到各润滑点。

3 系统配置注意事项

- 在容积式润滑系统中，每一个润滑点必须单独对应容积式分配器的每一个定量出油孔，进行直通式润滑。
- 须搭配容积式润滑泵使用，严禁与抵抗式润滑泵配合使用。

Schematic diagram of de-pressurized quantified oil delivery

When the volumetric lubrication pump is operating, the lubricant is conveyed into the volumetric distributor (model GFA/GFB). When the volumetric distribution is full of oil, the lubrication pump stops operation and depressurizes automatically. The spring in the distributor boosts the piston inside, and quantified lubricant is conveyed to lubrication locations.

Schematic diagram of pressurized quantified oil delivery

When the volumetric lubrication pump is working, the delivered pressurized oil is used to advance the piston inside the volumetric distribution (model GFD/GFE), and the lubricant quantified in the volumetric distributor is conveyed to lubrication points compulsorily.

Attentions for system configuration

- In the volumetric lubrication system, each lubrication system shall match each quantified oil outlet of the volumetric distributor for through lubrication.
- It must be used with the volumetric lubrication pump, and cannot be used with the resistible lubrication pump.

4 系统特点

- 每次可将润滑油精准定量地输送到各润滑点。
- 各定量孔出油量不会因油品的黏度、温度变化、注油时间长短而发生变化。
- 同规格的容积式分配器每次出油量不受安装位置的远近、高低等因素影响。
- 按需计量分配各润滑点油量，在实际使用当中，容积式系统更为节能环保，经济实用。

System features

- The lubricant is quantified accurately and delivered to lubrication points.
- Delivered oil volume from quantified orifices is not subject to oil viscosity, temperature and oil injection time.
- Delivered oil volume of the volumetric distributor with the same specifications is not subject to installation location and height.
- Oil volume for lubrication points is distributed according to needs, and the volumetric system is more energy conservation and environmental protection in actual application.

5 系统安装注意事项

- 各油路管口裁剪平整，确保连接完好不漏油，否则将导致管路有缓慢漏油卸压甚至无法聚压，使分配器无法正常储油或出油。
- 安装时保证各管路内部清洁，润滑泵和主油管路中严禁加装任何止逆装置。
- 请使用优质洁净的新润滑油，最佳通用黏度NLGI 000-0。严禁使用具有高独特性或酸碱性的油品。
- 适用温度0-50℃
- 注意使用环境温度变化，适当调整使用油品黏度值，建议在15℃以下时用000油品，30℃以上时用00-0油品。

Attentions for system installation:

- Oil pipes are cut in orderly to ensure the pipelines are connected well without leakage; otherwise, the pipeline may leak oil slowly, cannot stock pressure, and the distributor cannot store oil or eject oil as usual.
- Keep interior of the pipeline clean in installation, and the lubrication pump and main oil pipe cannot be installed with any check valve devices.
- Please use any high-quality and clean new lubricant, and the best general viscosity is NLGI 000-0. Oil product with unique feature or alkali or acid features.
- Applicable temperature 0-50℃.
- Please notice changes of environmental temperature, adjust oil viscosity, 000 oil product cannot be used under the temperature of 15℃, and 00-0 oil product shall be used above the temperature of 30℃.

GTB-A2 型(Type)

数显油脂润滑泵 Digital Grease lubrication pump

■ 容积式电动油脂润滑泵 (齿轮泵) Volume electric grease lubrication pump (gear pump)



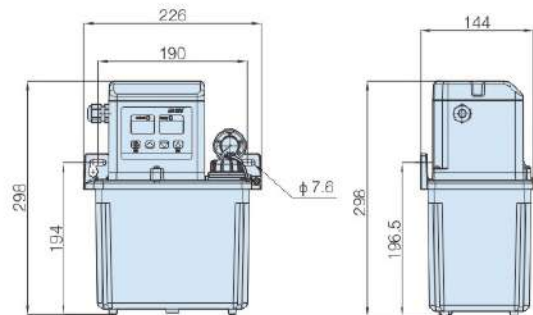
GTB-A2P3

注: ★表示优选型号
Note: ★ indicates preferred model

订货编制说明 Order description

GTB-A2		压力开关 Pressure switch	液位开关 Liquid level switch
P	压力开关 ★ Pressure switch	空白 Blank	无液位开关 Without level switch
空白 Blank	无 None	T	有液位开关 (NPN) ★ with level switch
油箱容积 Oil tank volume		出油口径 Outlet pipe diameter	
3	3L ★	6	接Φ6管 Connected to Φ6 pipe ★
4	4L		
电压 Voltage type		吐出量 Throughput	
2	交流 220VAC, 50/60Hz ★	2	200mL/min ★
9	直流 24VDC		

产品外形尺寸图 Product dimension figure



GTB-A2P3

Performance and characteristics

- The system is configured with 3 action modes.
 - a lubrication: when turning on, execute lubrication timing.
 - b Intermittent: execute intermittent timing after lubrication is completed.
 - c Memory: in case of power on after power power off, resume incomplete intermittent time.
- lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - a When pressure is insufficient, Erp is displayed.
 - b When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1~999 (seconds), INT intermittent time: 1~999 (minutes) (tailored if specially required) The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFC/GFDE/GFE/GFG/GFH distributor (refer to pages 57~62).
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=8min)
(Work system S2=8min)

项目 Item 型号 Models	电压 voltage(V)	输出功率 Output Power (W)	润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	吐出口径 throughout caliber (mm)	额定压力 Rated pressure (MPa)	吐出量 Throughout (mL/min)	脱压装置 de-pressuring device	压力 开关 Pressure Switch	油脂 传感器 Grease sensor	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
GTB-A2	AC220 DC24	60 35	1~999	1~999	Φ6	3.0	200	有 Yes	有 Yes	可选配 Optional	有 Yes	3 4	NLGI 000	0~50℃

GTB-C2 型(Type)

PLC 油脂润滑泵 PLC grease lubrication pump

■ 容积式电动油脂润滑泵 (齿轮泵) Volume electric grease lubrication pump (gear pump)



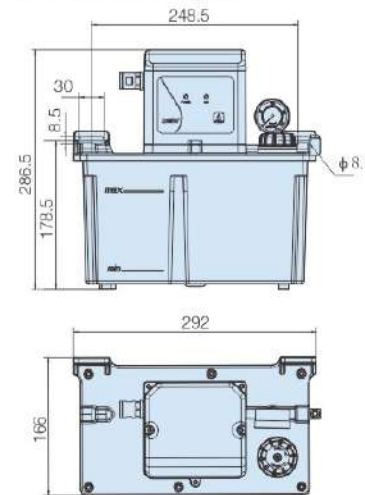
GTB-C2P3

注: ★表示优选型号
Note: ★ indicates preferred model

订货编制说明 Order description

GTB-C2		压力开关 Pressure switch	液位开关 Liquid level switch
P	压力开关 ★ Pressure switch	空白 Blank	无液位开关 Without level switch
空白 Blank	无 None	T	有液位开关 (NPN) ★ with level switch
油箱容积 Oil tank volume		出油口径 Outlet pipe diameter	
3	3L ★	6	接Φ6管 Connected to Φ6 pipe ★
4	4L		
电压 Voltage type		吐出量 Throughput	
2	交流 220VAC, 50/60Hz ★	2	200mL/min ★
9	直流 24VDC		

产品外形尺寸图 Product dimension figure



GTB-C2P4

Performance and characteristics

- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
- The panel indicator light indicates power and lubrication status of the oil injection mold. The system is provided with FEED key, and compulsory lubrication is applied.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFC/GFDE/GFE/GFG/GFH distributor (refer to pages 57~62).
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=8min)
(Work system S2=8min)

项目 Item 型号 Models	电压 voltage(V)	输出功率 Output Power (W)	润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	吐出口径 throughout caliber (mm)	额定压力 Rated pressure (MPa)	吐出量 Throughout (mL/min)	脱压装置 de-pressuring device	压力 开关 Pressure Switch	油脂 传感器 Grease sensor	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
GTB-C2	AC220 DC24	60 35	须和PLC系统连接 Shall be connected to the PLC system		Φ6	3.0	200	有 Yes	有 Yes	可选配 Optional	无 No	3 4	NLGI 000	0~50℃

GTC-C2 型(Type)

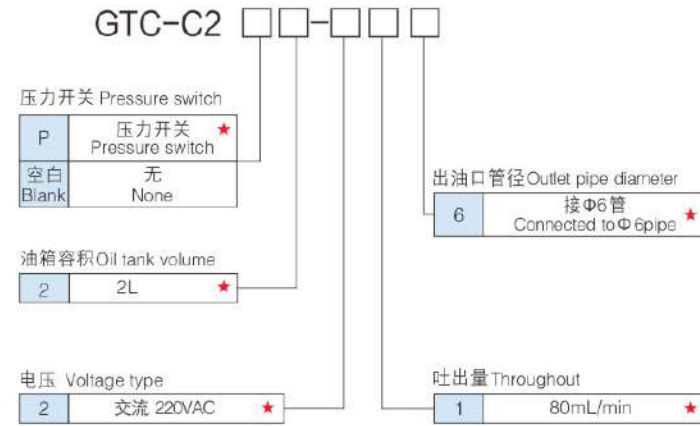
PLC 油脂润滑泵 PLC grease lubrication pump

■ 容积式电动油脂润滑泵 (齿轮泵) Volume electric grease lubrication pump (gear pump)

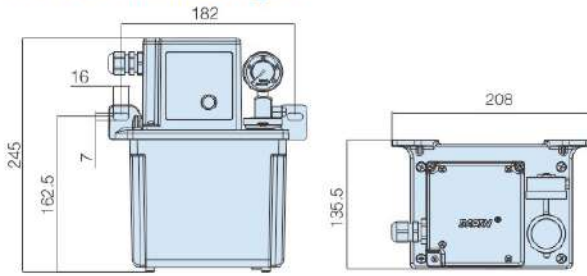


Φ6 (主出油口)
Φ6 (Main oil outlet)
(套管帽 M10x1.0)
(Sleeve tube cap M10 x 1.0)
泵体螺纹 PT1/8
Pump body thread PT1/8

订货编制说明 Order description



产品外形尺寸图 Product dimension figure



性能与特点

- 压力开关(可选配),当压力不足时可将异常信号输出。
- 系统中设有'FEED'键,可强制润滑。
- 电机设有自我保护功能,防止电机温度过高或过载。
- 在容积式系统中设有脱压装置,需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57~62页)。
- 设有溢流阀,可保护注油机及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏电机。

Performance and characteristics

- Pressure switch (optional) are provided. When pressure is insufficient, abnormal signal is output.
- The system is provided with FEED key, and compulsory lubrication is applied.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- Decompression device is provided with volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor (refer to pages 57~62).
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

项目 Item 型号 Models	电机 Motor		控制功能 Control function	额定压力 Rated pressure (MPa)	最大输出压力 Maximum output pressure (MPa)	吐出量 Throughput (mL/min)	出油口径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
	电压 voltage (V)	输出功率 output power (W)									
GTC-C2	AC220V	20	由外部 PLC 控制 Controlled by an external PLC	3.0	4.0	80	Φ 6	可选配 Optional	2(树脂 Resin)	NLGI 000	0~50℃

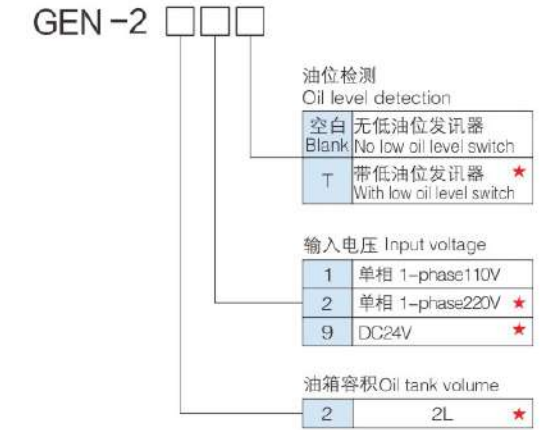
GEN-2 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

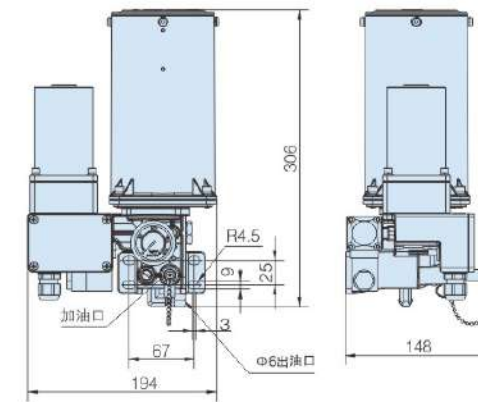


订货编制说明 Order description



注: * 表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设电磁阀泄压装置,当润滑泵停止运行,确保系统自动迅速泄压。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 请使用加油枪通过油脂过滤器向润滑泵储油箱内添加油脂,可避免杂质,空气混入润滑系统,从而提高润滑系统使用效果。
- 可选配:润滑系统设置压力开关,可有效监控润滑系统管路中断流,渗漏等压力不足现象。
- 采用弹簧式压油盘,真空吸油。
- 在容积式系统中设有脱压装置,需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57~62页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- Set the solenoid valve pressure relief device, when the lubrication pump stops running, ensure that the system automatically and quickly relieve pressure.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- An exhaust valve device is provided to eliminate air from the lubrication pump chamber and ensure lubrication pump drain unblocked.
- With low oil level transmitter, normally open contacts or normally closed contacts can be selected according to the system. The standard model is a normally open contact.
- Use a grease gun to add grease to the lubrication pump reservoir through a grease filter to avoid impurities and air into the lubrication system to improve the lubrication system.
- Optional: The lubrication system is equipped with a pressure switch, which can effectively monitor the pipeline system to interrupt the flow, leakage and other pressure shortage phenomenon.
- A spring-loaded oil pan is used for vacuum suction.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor (refer to pages 57~62).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	吐出量 Throughput (mL/min)	出油口径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	总功率(W) Total power	适用油品 Applicable oils	适用温度 Applicable temperature
GEN-222	8.0	20	Φ6	2	70	NLGI 000-0	-10℃~60℃
GEN-229	8.0	20	Φ6	2	60	NLGI 000-0	

GEO-2 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

订货编制说明 Order description

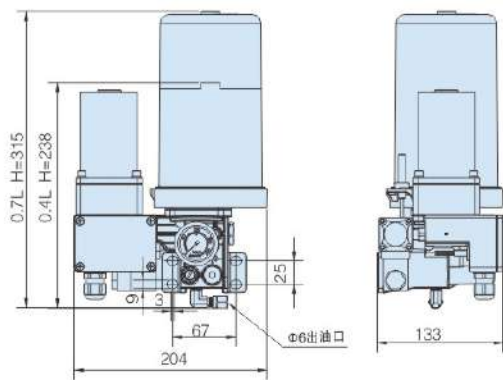


GEO -2

油位检测 Oil level detection	
空白	无低油位发讯器 Blank No low oil level switch
T	带低油位发讯器 ★ With low oil level switch
输入电压 Input voltage	
1	单相 1-phase 110V
2	单相 1-phase 220V ★
9	DC24V ★
油箱容积 Oil tank volume	
7	0.7L ★
4	0.4L

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 内设电磁阀泄压装置,当润滑泵停止运行,确保系统自动迅速泄压。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵 排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 可选配:润滑系统设置压力开关,可有效监控润滑系统管路中断流,渗漏等压力不足现象。
- 采用罐装式油脂,可减少杂质,混入油脂内,更换方便,且不污染环境。
- 在容积式系统中设有脱压装置,需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57~62页)。

Performance and characteristics

- The duty cycle of the lubrication pump can be controlled by the main PLC or a separate controller.
- Built-in solenoid valve pressure relief device, the system automatically releases pressure quickly when the lubrication pump stops running.
- Equipped with a pressure regulating valve device, the working pressure of the lubrication pump can be independently set to ensure safe operation.
- An exhaust valve arrangement is provided to eliminate lubrication of the air in the pump chamber and to ensure that the lubrication pump drains the oil smoothly.
- For low oil level transmitters, normally open or normally closed contacts can be selected depending on the system. The standard model is a normally open contact.
- Optional: The lubrication system is equipped with a pressure switch, which can effectively monitor the pipeline system to interrupt the flow, leakage and other pressure shortages.
- The use of grease cartridge can reduce impurities, mix in grease, and be easy to replace without polluting the environment.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor (refer to pages 57~62).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	吐出量 Throughput (mL/min)	出油口径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	总功率(W) Total power	适用油品 Applicable oils	适用温度 Applicable temperature
GEO-272	8.0	20	Φ6	0.7	70	NLGI 000-0	-10°C~60°C
GEO-279	8.0	20	Φ6	0.7	60	NLGI 000-0	

GED-2 型(Type)

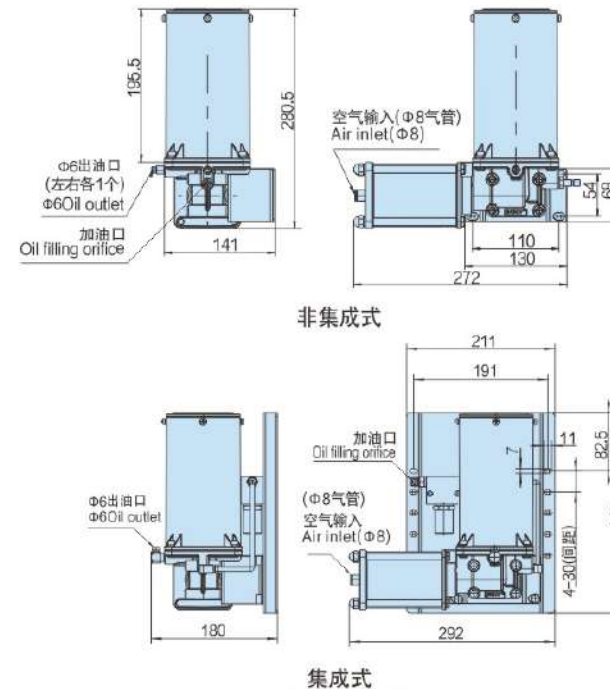
气动油脂润滑泵 Pneumatic grease lubrication pump

■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

订货编制说明 Order description



产品外形尺寸图 Product dimension figure



GED-2

油箱容积 Oil tank volume	
2	2L ★
气体输入管径 Gas input pipe diameter	
1	Φ8 ★
2	Φ10
低油位开关 Grease level switch	
空白	无油位开关 Blank Without low level switch
T	带油位开关 ★ With low level switch
控制器类型 Controller type	
A	A型 A Type
C	C型 C Type ★
空白	无 None
压力开关 Pressure switch	
P	压力开关 ★ Pressure switch
空白	无 None
系统类型 System type	
J	集成系统 ★ 注/Note 1 Integrated system

注1: 非集成式压力开关、控制类型不可选
note 1: Non-integrated pressure switch, control type is not selectable

注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 可通过调整输入气压大小的方式调节输出压力,来达到符合各种机器的油压需求。
- 气动泵的出油频次可通过空气输入频率调整。
- 可选配附有定时控制装置,能使供油时间及间歇时间可做双段式调整。
- 可选配有压力开关装置,可检测反应下列漏失:
(一)管路破裂:检测管内压力不足。
(二)气压不足:检测气压压力不足。
(三)油压不足:检测输出功率不良等致使压力不足的情况。
- 可选配低油位发讯器,默认常开型,可检测油量不足的情况。
- 该款型号气动泵设置有脱压装置,需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57~62页)。

Performance and characteristics

- The output pressure can be adjusted by modifying the input air pressure to meet the hydraulic requirements of various machines.
- The oil discharge frequency of the pneumatic pump can be adjusted by modifying the air input frequency.
- An optional timing control device can be installed to enable dual-stage adjustment of the oil supply time and interval time.
- An optional pressure switch device can be installed to detect the following leaks:
(1) Pipe rupture: Detects insufficient pressure inside the pipe.
(2) Insufficient air pressure: Detects insufficient air pressure.
(3) Insufficient oil pressure: Detects situations where pressure is insufficient due to poor output power, etc.
- An optional low oil level sensor is available, defaulting to a normally open type, which detects insufficient oil levels.
- This model of pneumatic pump is equipped with a pressure relief device and must be used in conjunction with GFA/GFB/GFD/GFE/GFG/GFH distributors (refer to pages 57~62).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	流量(mL/cy) Flow	气源压力(MPa) Gas supply pressure	脱压阀 Depressurized valve	油箱容量(L) Oil tank volume	吐出压力(MPa) Rated pressure	适用油品 Applicable oils	适用温度 Applicable temperature
GED	10	0.5~0.7	有(Yes)	2	4.0~5.0	NLGI 000-00	-10°C~60°C

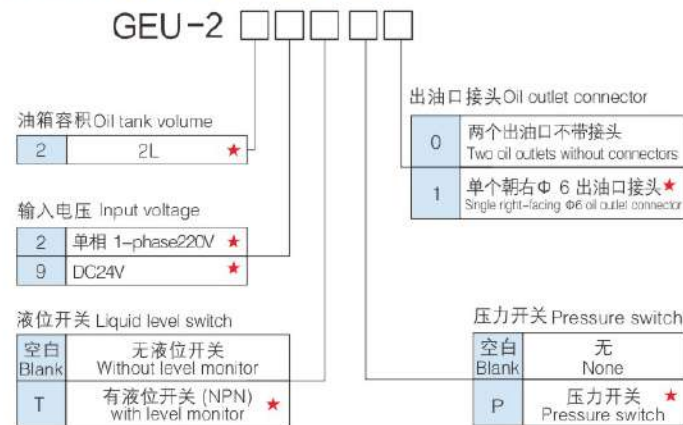
GEU-2 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

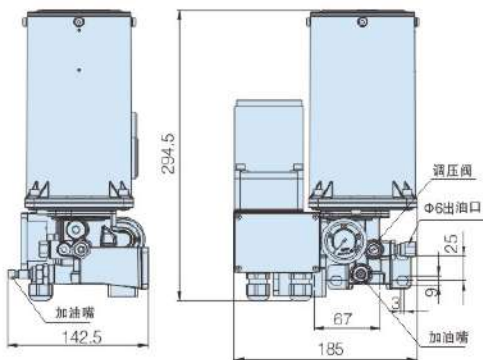


订货编制说明 Order description



注: * 表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设电磁阀泄压装置, 当润滑泵停止运行, 确保系统自动迅速泄压。
- 设有调压阀装置, 设定润滑泵的工作压力, 保障系统工作安全。
- 设有低油位发讯器, 常开触点或常闭触点可根据系统选择, 标准款为常开触点。
- 请使用加油枪通过油脂过滤器向润滑泵储油箱内添加油脂, 可避免杂质, 空气混入润滑系统, 从而提高润滑系统使用效果。
- 润滑泵可内置压力开关, 有效监控润滑系统管路中断流, 渗漏等压力不足现象。
- 采用弹簧式压油盘, 真空吸油。
- 在容积式系统中设有脱压装置, 需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57-62页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- Set the solenoid valve pressure relief device, when the lubrication pump stops running, ensure that the system automatically and quickly relieve pressure.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- With low oil level transmitter, normally open contacts or normally closed contacts can be selected according to the system, The standard model is a normally open contact.
- Use a grease gun to add grease to the lubrication pump reservoir through a grease filter to avoid impurities and air into the lubrication system to improve the lubrication system.
- The lubrication system is equipped with a pressure switch, which can effectively monitor the pipeline system to interrupt the flow, leakage and other pressure shortage phenomenon.
- A spring-loaded oil pan is used for vacuum suction.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor(refer to pages 57~62).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	额定电压(V) Rated voltage	吐油量 Throughout (mL/min)	出油口管径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	总功率(W) Total power	适用油品 Applicable oils	适用温度 Applicable temperature
GEU-222TP1	5.0	AC220	12	Φ6	2	60	NLGI 000-0	-10°C~60°C
GEU-229TP1	5.0	DC24	12	Φ6	2	60	NLGI 000-0	

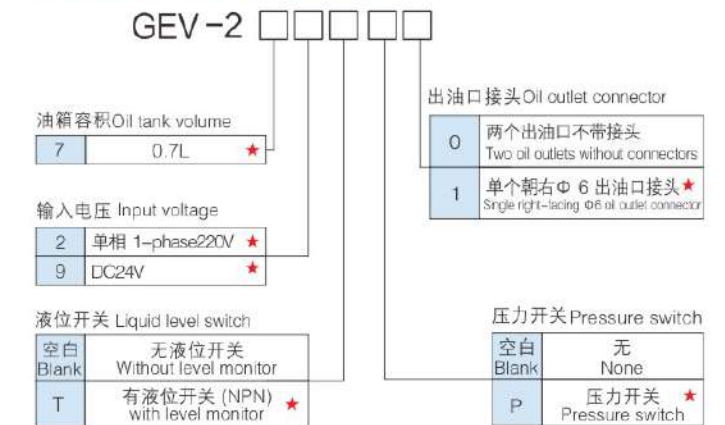
GEV-2 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

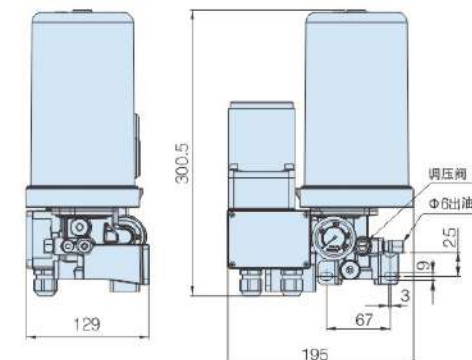


订货编制说明 Order description



注: * 表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设电磁阀泄压装置, 当润滑泵停止运行, 确保系统自动迅速泄压。
- 设有调压阀装置, 设定润滑泵的工作压力, 保障系统工作安全。
- 设有低油位发讯器, 常开触点或常闭触点可根据系统选择, 标准款为常开触点。
- 采用罐装式油脂, 可减少杂质, 混入油脂内, 更换方便, 且不污染环境。
- 润滑泵可内置压力开关, 有效监控润滑系统管路中断流, 渗漏等压力不足现象。
- 采用弹簧式压油盘, 真空吸油。
- 在容积式系统中设有脱压装置, 需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57-62页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- Set the solenoid valve pressure relief device, when the lubrication pump stops running, ensure that the system automatically and quickly relieve pressure.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- With low oil level transmitter, normally open contacts or normally closed contacts can be selected according to the system, The standard model is a normally open contact.
- The use of grease cartridge can reduce impurities, mixed into the grease, easy to replace, and does not pollute the environment.
- The lubrication system is equipped with a pressure switch, which can effectively monitor the pipeline system to interrupt the flow, leakage and other pressure shortage phenomenon.
- A spring-loaded oil pan is used for vacuum suction.
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor(refer to pages 57~62).

规格型号及技术参数 Specifications, models and technical parameters

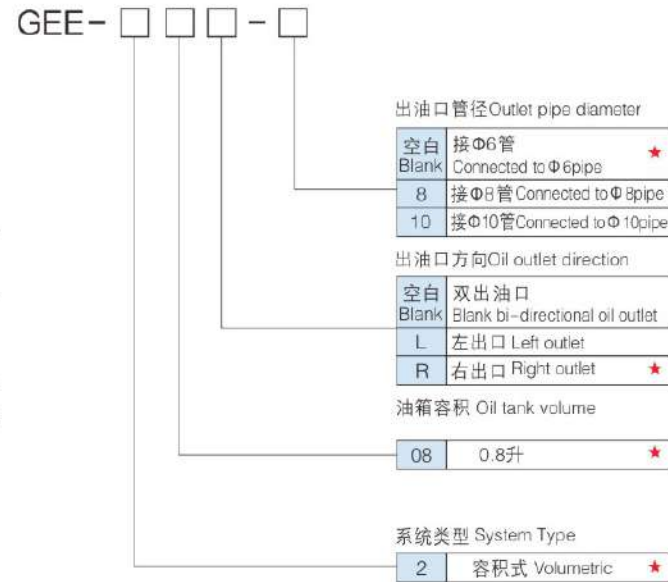
型号 Model	额定压力(MPa) Rated pressure	额定电压(V) Rated voltage	吐油量 Throughout (mL/min)	出油口管径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	总功率(W) Total power	适用油品 Applicable oils	适用温度 Applicable temperature
GEV-272TP1	5.0	AC220	12	Φ6	0.7	60	NLGI 000-0	-10°C~60°C
GEV-279TP1	5.0	DC24	12	Φ6	0.7	60	NLGI 000-0	

GEE-2 型(Type)

手动油脂润滑泵 Manual grease pump

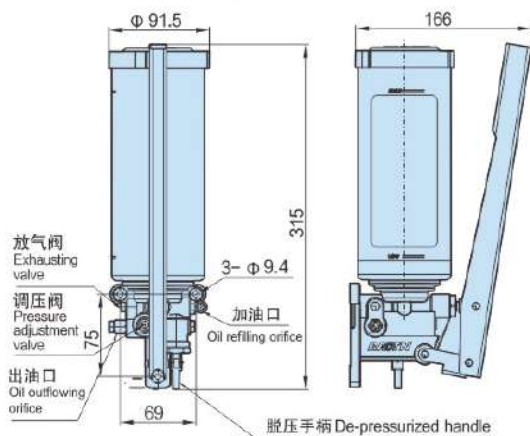
■ 容积式油脂润滑泵(柱塞泵) Volumetric grease lubrication pump (piston pump)

订货编制说明 Order description



注: *表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



规格型号及技术参数 Specifications, models and technical parameters

型号规格 Models and specifications	吐油量 Throughput (mL/cy)	最大吐出压力 Maximum throughput pressure (MPa)	出油口方向 Oil outlet direction	出油口径 Oil outlet pipe diameter (mm)	油杯容量 volume of the oil cup (L)	重量 Weight (KG)
GEE-208L	1.2	5	左或右 left or right	Φ 6	0.8	2.0
GEE-208R				Φ 8 Φ 10		

性能与特点

- 采用压油块, 真空吸油, 操作简单、方便, 设有调压阀, 防止润滑泵工作压力超负荷。
- 设有手动脱压阀, 当压力达到调节值时, 可手动卸压。停止供油, 拨动脱压手柄至图二状态即可脱压。
- 在容积式系统中设有脱压装置, 需配合GFA/GFB/GFD/GFE/GFG/GFH分配器使用(参考57~62页), 设有排气阀, 以清理泵内空气, 确保排油顺畅。出油口可依据管路的安装, 设于左边或右边, 使用手动或电动加油枪填充油脂。

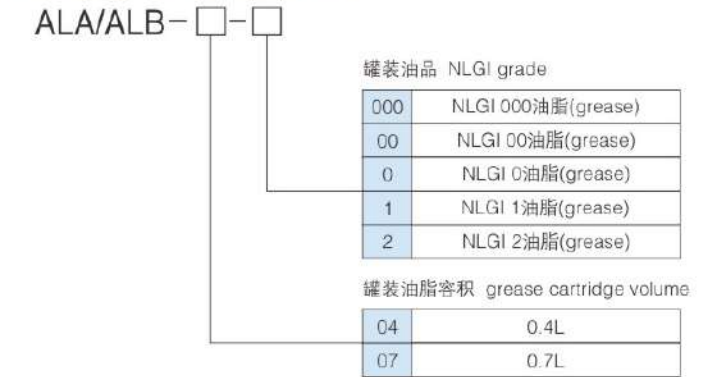
Performance and characteristics

- The oil pressurization block is adopted for vacuum oil suction, operation is simple and convenient, and adjustment valve is used to prevent over-pressure of the lubrication pump.
- Equipped with a manual pressure relief valve, when the pressure reaches the adjusted value, the pressure can be manually relieved. Stop the oil supply, turn the pressure release handle to the state shown in Figure 2 to release the pressure
- Equipped with a pressure relief device in the volumetric system, used with GFA/GFB/GFD/GFE/GFG/GFH distributor (refer to pages 57~62), and exhausting valve is provided to clear air in the pump to ensure barrier-free oil drainage. The oil outlet is located at the left and right sides of the pipeline, and greaser is filled manually or electrically with sprayer gun.

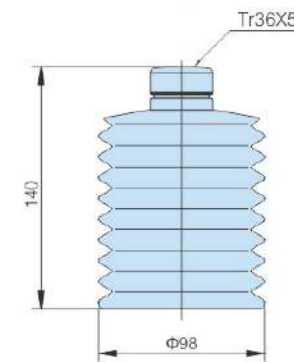
ALA/ALB 型(Type)

罐装油脂 Grease cartridge

订货编制说明 Order description



产品外形尺寸图 Product dimension figure



性能与特点

- 油脂适用温度范围零下5至120摄氏度; (低于零下5摄氏度请选用ALB油脂)
- 与传统锂基脂相比, 具有高滴点, 强抗压性能等特点; 润滑效果佳, 机械稳定性和胶体安定性良好;
- 直接更换油脂, 操作简单, 环保卫生;
- 该罐装油脂适用; 塑胶, 食品, 锻压, 切削机床等机械设备的集中润滑系统。

Performance and characteristics

- The grease is suitable for temperatures ranging from minus 5 to 120 degrees Celsius; (Below minus 5 anthracene, please add ALB grease)
- Compared with traditional lithium base grease, this product has a dropping point and strong compression resistance; good lubrication effect, good mechanical stability and good gel stability;
- Direct replacement of grease, easy to operate, environmentally friendly;
- The grease cartridge is suitable for centralized lubrication of mechanical equipment such as plastics, food, forging and cutting machine tools.

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	Model	ALA			ALB		
		000	00	0	000	00	0
等级 Grease grade							
滴点 Dropping Point	不低于	160	165	170	160	165	170
适用温度 Proper temperature		-5°C~120°C			-20°C~120°C		
工作锥入度0.1mm Working cone penetration 0.1mm		445~475	400~430	355~385	445~475	400~430	355~385
腐蚀(T2铜片, 100°C, 24h) Corrosion (T2 copper, 100 °C, 24 h)		铜片无绿色或黑色色变					
防腐蚀性(52°C, 24h) Corrosion resistance (52°C, 24h)		合格					
水流失(38°C, 1h), (质量分数)% Water loss (38°C, 1 h), (mass fraction)%	不大于	12	8	7	12	8	7
极压性能(四球机法)PB/N Extreme pressure performance (four ball machine method) PB/N	不小于	588					
蒸发量(93S°C, 22h), % Evaporation (99°C, 22 h), %	不低于	不低于2%					
烧结负荷PD值kgf Sintering load PD value kgf		250	250	250	250	250	250
杂质(显微镜法)个/cm³ Impurity (microscopy)/cm³	25 μm	不大于 3000					
	75 μm	不大于 500					
	100 μm	不大于 0					

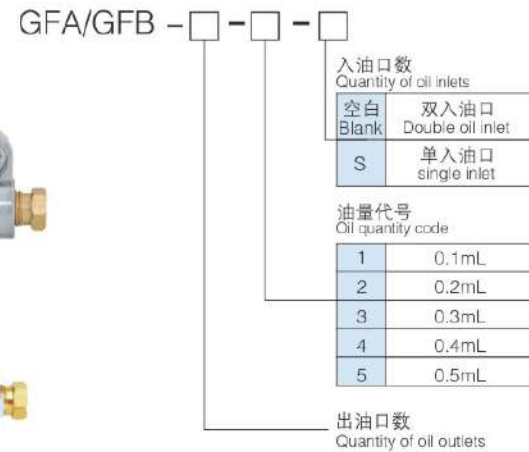
- 罐装油脂为一次性产品, 严禁用完后再次填充使用。
- 储存和使用过程中, 应防止灰尘, 杂质混入, 避免阳光直射。
- 勿与其它润滑脂混合使用, 不同润滑脂之间可能会发生物理或化学反应导致性能下降。

- grease cartridge is a disposable product, and it is strictly forbidden to refill after use.
- During storage and use, it should be protected from dust and impurities and avoid direct sunlight.
- Do not mix with other greases. Physical or chemical reactions may occur between different greases to reduce performance.



GFA-05

订货编制说明 Order description



GFA/GFB-01

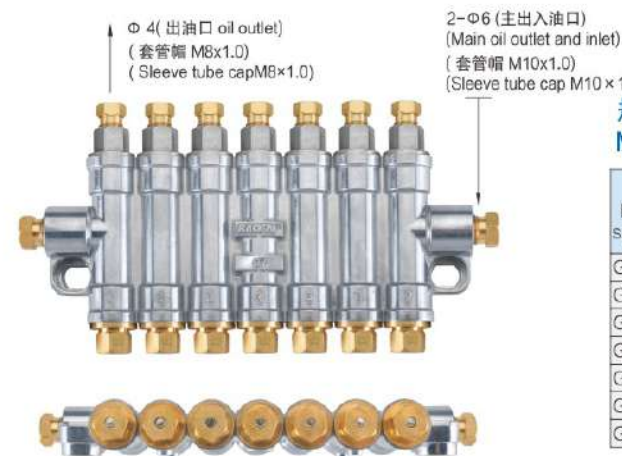


GFB-05

- 油量表示方法:(注:当所有出油口油量值一样时,只用一个油量值表示)
- 例1:GFA/GFB-05-2 表示GFA/GFB型5位分配器第1, 2, 3, 4, 5出油口油量全部为0.2毫升/次。
- 例2:GFA/GFB-05-53235 表示GFA/GFB型5位分配器第1, 2, 3, 4, 5出油口油量分别为0.5; 0.3; 0.2; 0.3; 0.5毫升/次。
- 适用环境温度: -10℃至50℃。
- Oil volume is indicated as follows (Notes: When oil volume of all oil outlets is the same, only one oil volume level is indicated).
- Example 1: GFA/GFB-05-2 means the oil ejection volumes of positions 1, 2, 3, 4 and 5 of the 5-position distributor, and oil ejection volume shall be 0.2mL/time.
- Example 2: GFA/GFB-05-53235 means the oil ejection volumes of positions 1, 2, 3, 4 and 5 of the 5-position distributor, and oil ejection volume shall be 0.5, 0.3, 0.2, 0.3 and 0.5mL/time.
- Applicable ambient temperature: -10℃ to 50℃.

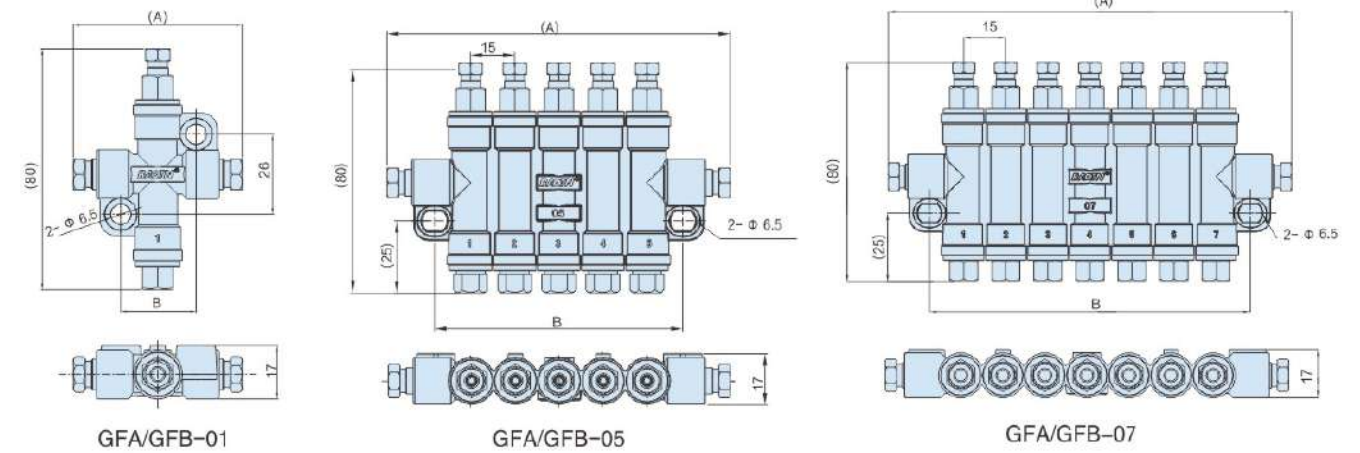
规格型号及技术参数: Models, specifications and technical parameters

型号规格 Models and specifications	出口数 Outlet quantity	A	B	工作压力 Work pressure (MPa)	适用油品 Applicable oils	吐油量 Throughput (mL/cy)	重量 Weight (g)
GFA/GFB-01	1	55	24.5	2.0-3.0	NLGI 000	0.1/0.2/0.3 /0.4/0.5	96
GFA/GFB-02	2	69	39				168
GFA/GFB-03	3	86	54.5				232
GFA/GFB-04	4	102	69.5				299
GFA/GFB-05	5	116.5	84.5				359
GFA/GFB-06	6	130	99.5				464
GFA/GFB-07	7	144	114.5				493

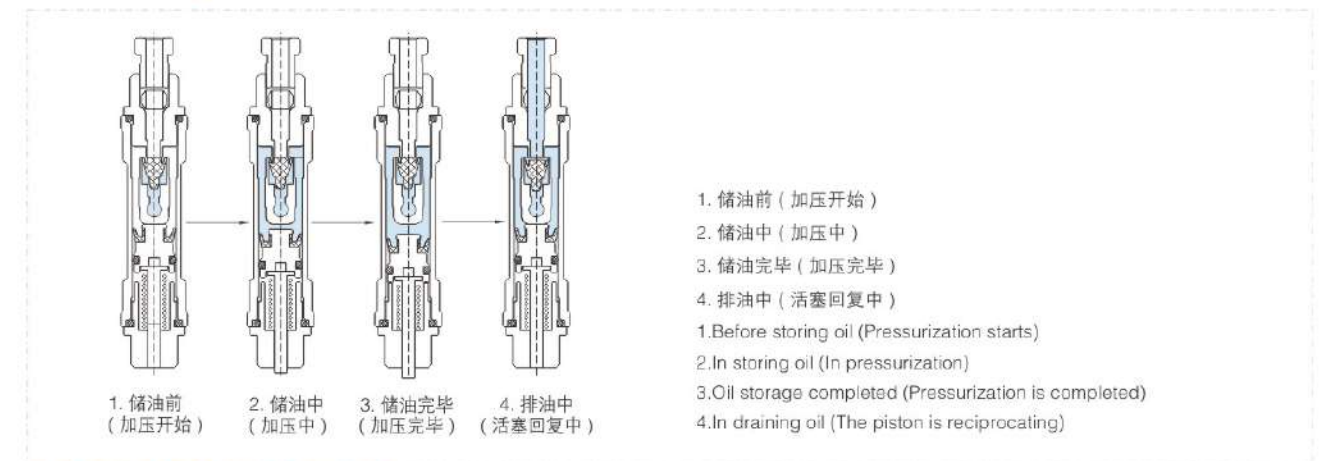


GFA-07

产品外形尺寸图 Product dimension figure



GFA/GFB 分配器工作原理图: Schematic diagram of the GFA/GFB distributor:

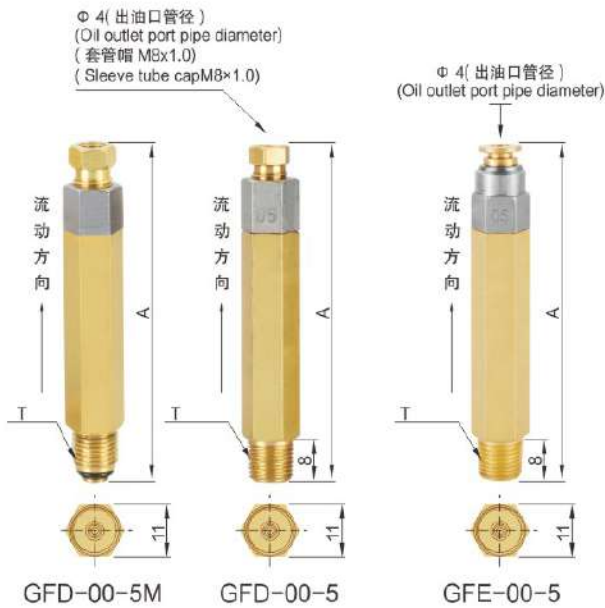


GFA/GFB 分配器工作原理说明: Schematic diagram of the GFA/GFB distributor:

- 从润滑泵输送出的润滑油,经GFA/GFB分配器中的伞形阀门始往上推动。
- 当伞形阀门把出油孔封闭后,油压迫使GFA/GFB储油块克服弹簧力开始下降,使油腔开始储油。
- 当GFA/GFB储油块被顶至油腔顶点时,GFA/GFB储油完毕。当润滑泵停止供油时,其卸压阀自动开启,使主管管内润滑油通过卸压阀回油。此时系统压力下降,同时伞形阀复位并封闭进油口,而GFA/GFB储油块在弹簧力的作用下开始把油腔内的润滑油往出油口压出。
- The lubricant conveyed from the lubrication pump shall be pulled up from the umbrella valve in the GFA/GFB distributor. When the umbrella valve seals the oil outlet port, the oil pressure forces GFA/GFB oil storage block to overcome the spring force to lower the oil level, and the oil cavity starts to store oil.
- When GFA/GFB oil storage block is pushed to the top of the oil cavity, oil storage of the GFA/GFB is completed.
- When the lubrication pump stops supplying oil, the unloading valve is opened automatically, and the main oil pipe injects oil into it, and the system pressure is lowered down. The umbrella valve resets and seals the inlet oil, and the GFA/GFB oil storage block starts to eject lubricant in the oil cavity.

GFD/GFE 型(Type)

单支定量加压式油脂分配器 Single pressurized grease distributor



订货编制说明 Order description

GFD/GFE-00-□□

油量代号 Oil quantity code	吐出量 Throughput (mL/cy)
05	0.05mL
1	0.1mL
2	0.2mL
3	0.3mL
4	0.4mL
5	0.5mL

螺纹形式 Thread form	记号 Mark
空白 Blank	PT1/8
M	M10X1

规格型号及技术参数: Models, specifications and technical parameters

型号规格 Models and specifications	吐出量 Throughput (mL/cy)	工作压力 Work pressure (MPa)	适用油品 Applicable oils	A	记号 Mark	T	重量 Weight (g)
GFD/GFE-00-05	0.05	3.0-8.0	NLGI 000-00	53	00		38
GFD/GFE-00-1	0.1			53	01		38
GFD/GFE-00-2	0.2			60	02	PT1/8	44
GFD/GFE-00-3	0.3			60	03	M10X1	44
GFD/GFE-00-4	0.4			71	04		54
GFD/GFE-00-5	0.5			71	05		54

定量加压式油脂分配器 Prelubrication grease distributor



订货编制说明 Order description

GFD/GFE-□□-□□-□□-□□-□□

油量代号 Oil quantity code	吐出量 Throughput (mL/cy)
05	0.05mL
1	0.1mL
2	0.2mL
3	0.3mL
4	0.4mL
5	0.5mL

入油口数量 Quantity of oil inlets	入油口类型 Inlet type
空白 Blank	双入油口 Double oil inlet
S	单入油口 Single inlet

连接体 Connector	记号 Mark
空白 Blank	连接体为CAB The connector is CAB
C	连接体为CAC The connector is CAC

单支本体螺纹 Single body thread	记号 Mark
空白 Blank	本体螺纹PT1/8 Body thread PT1/8
M	本体螺纹M10X1.0 Body thread M10X1.0

注: *表示优选型号
Note: * indicates preferred model

- 油量表示方法:(注:当所有出油口油量值一样时,只用一个油量值表示)
- 例1:GFD/GFE-05-2表示GFD/GFE型5位分配器第1,2,3,4,5出油口油量全部为0.2毫升/次。
- 例2:GFD/GFE-05-53235表示GFD/GFE型5位分配器第1,2,3,4,5出油口油量分别为0.5;0.3;0.2;0.3;0.5毫升/次。
- 适用环境温度: -10°C至50°C。
- ※注: GFD/GFE分配器有: 7~12位。
进油口螺纹有M10*1及PT1/8可选, 详情可致电咨询
- Oil volume indication: (notes: when oil volume values of all oil outlets are identical, represented with one oil volume).
- Example 1: GFD/GFE-05-02 means 5-position distributor with model of GFD/GFE, oil delivery volume of oil outlets 1, 2, 3, 4 and 5 is 0.2mL/time.
- Example 2: GFD/GFE-05-53235 means that outlet oil volumes of outlets 1, 2, 3, 4 and 5 of 5-position distributors with model of GFD/GFE are 0.5, 0.3, 0.2, 0.3 and 0.5mL/time.
- Applicable ambient temperature: -10°C to 50°C.
- ※ Note: 7-12 outlets for GFD/GFE distributor are available
Oil inlet thread option: M10*1 or PT1/8, pls contact for more detail

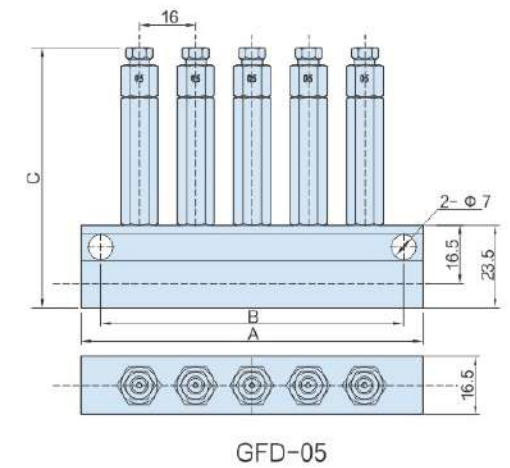
容积式油脂分配器 Volumetric grease distributor

规格型号及技术参数: Models, specifications and technical parameters

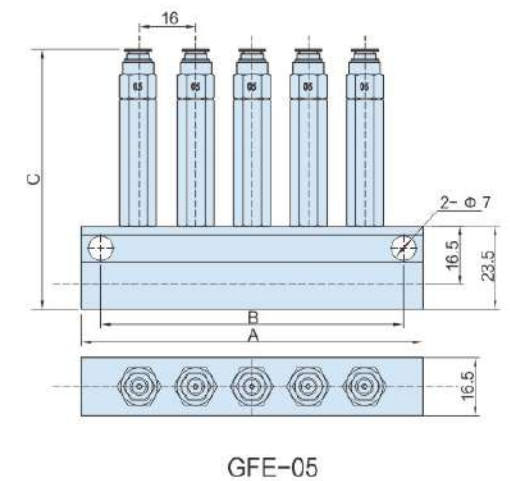
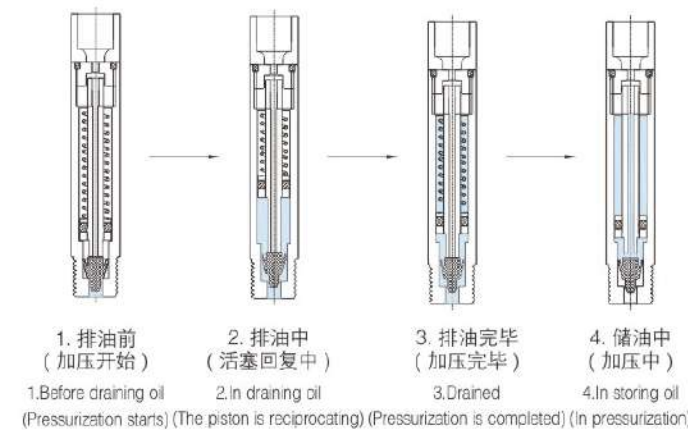
型号规格 Models and specifications	出口数 Outlet quantity	A	B	C	工作压力 Work pressure (MPa)	适用油品 Applicable oils	吐出量 Throughput (mL/cy)	重量 Weight (g)
GFD/GFE-02	2	49	38	68-86	3.0-8.0	NLGI 000-00	0.05; 0.1;	168
GFD/GFE-03	3	65	54	68-86			0.2; 0.3;	232
GFD/GFE-04	4	81	70	68-86			0.4; 0.5.	299
GFD/GFE-05	5	97	86	68-86				359

备注: C尺寸0.1cc为68mm, 0.2-0.3cc为75mm, 0.4-0.5cc为86mm。
Remarks: The measurement of C is respectively 68mm, 75mm and 86mm when the throughput is 0.1cc, 0.2-0.3cc, 0.4-0.5cc

产品外形尺寸图 Product dimension figure

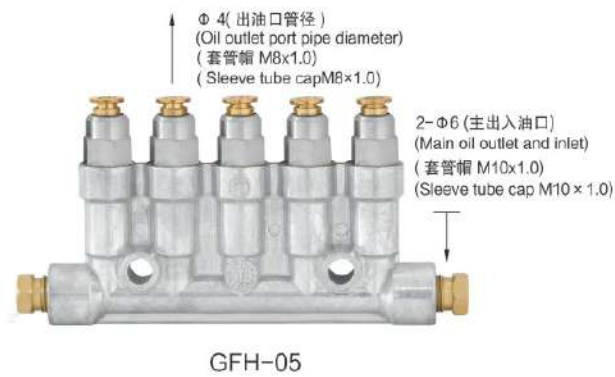
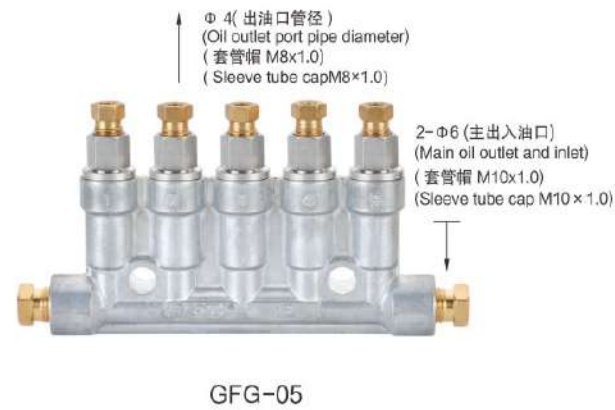


GFD/GFE 分配器工作原理图 Schematic diagram of the GFD/GFE distributor

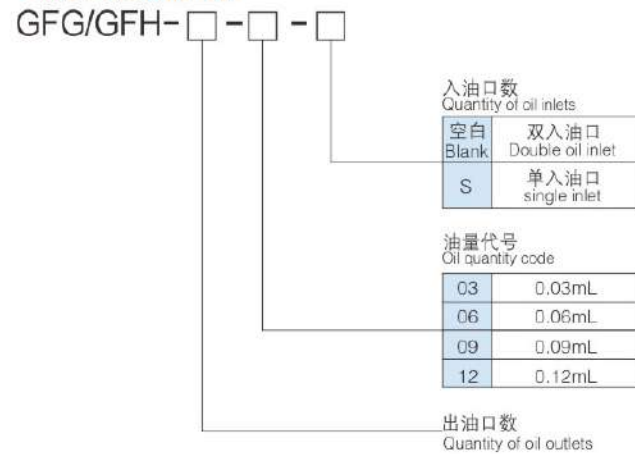


GFD/GFE 分配器工作原理说明 Rationale of the GFD/GFE distributor

- 从润滑泵中压送出来的润滑油,使GFD/GFE分配器中的伞形胶开始往上推动。
- 当伞形阀把芯杆中心孔封闭后,迫使活塞克服弹簧力开始上升。将油腔原先存储的润滑油排出。
- 当活塞移至油腔顶点时,排油同时完成。
- 润滑泵停止供油时,其泄压阀自动开启,使主油管内的润滑油通过卸压阀回油。此时系统压力下降,分配器中的活塞在弹簧的作用下开始复位,当伞形阀复位并封闭分配器进油时,则活塞把存储在油腔的润滑油通过芯杆小孔压送到油腔,同时下次的供油也准备完毕。
- Lubricant delivered from the lubrication pump makes umbrella valve in the GFD/GFE distributor drive upwards.
- When the umbrella valve closes central hole of the core bar, the piston overcomes the spring force to rise. Lubricant stored in the oil cavity is drained out.
- When piston moves to the top point of oil cavity, oil draining is completed.
- When lubrication pump stops oil supplying, the pressure release valve is automatically released to make lubricant in the main oil pipe to return through the decompression valve. At this moment, the system pressure is reduced, and piston in the distributor starts resetting with the function of spring. When the umbrella valve resets and closes oil outlet of the distributor, the piston delivers lubricant in the lower cavity through the core bar, and oil supply for the next time is ready.



订货编制说明 Order description

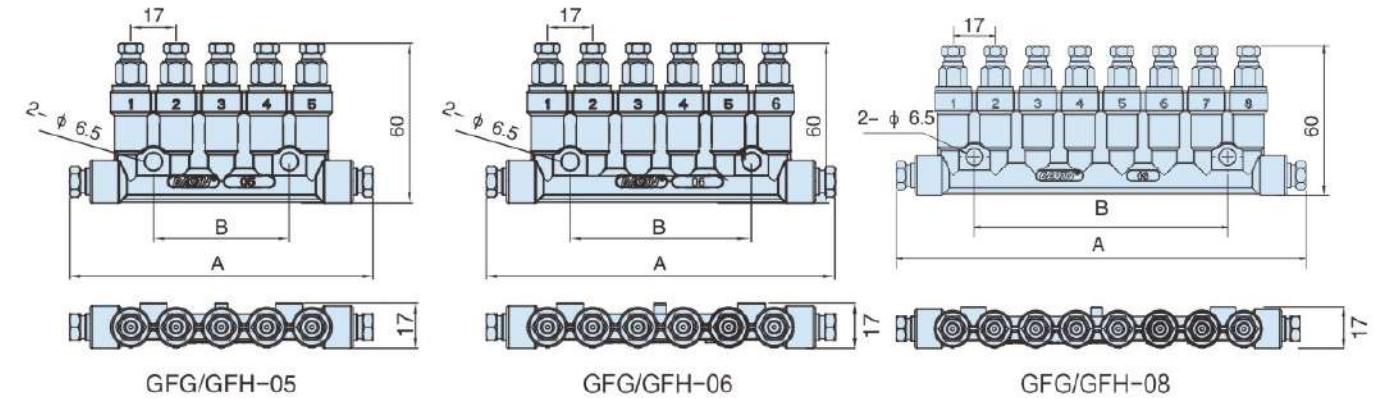


- 油量表示方法:(注:当所有出油口油量值一样时,只用一个油量值表示)
- 例1:GFG/GFH-05-03表示GFG/GFH型5口分配器第1, 2, 3, 4, 5出油口油量全部为0.03毫升/次。
- 例2:GFG/GFH-05-1209060303表示GFG/GFH型5口分配器第1, 2, 3, 4, 5出油口油量分别为0.12, 0.09, 0.06, 0.03, 0.03毫升/次。
- 例3:GFG/GFH-05-09-S表示GFG/GFH型5口分配器第1, 2, 3, 4, 5出油口油量全部为0.09毫升/次, 入油主管一端配套管和套管帽;入油主管另一端配塞头。
- 适用环境温度: -10°C至50°C。
- Oil volume indication: (notes: when oil volume values of all oil outlets are identical, represented with one oil volume).
- Example 1: GFG/GFH-05-03 means that the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlet of the GFG/GFH type 5-port distributor is all 0.03mL/time.
- Example 2: GFG/GFH-05-1209060303 means that the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlet of the GFG/GFH type 5-port distributor is 0.12, 0.09, 0.06, 0.03, 0.03 mL/time respectively.
- Example 3: GFG/GFH-05-09-S means that the oil volume of the 1st, 2nd, 3rd, 4th, and 5th oil outlet of the GFG/GFH type 5-port distributor is all 0.09mL/time, and one end of the oil inlet main pipe is matched with a pipe and an official cap; The other end of the oil inlet pipe is fitted with a plug.
- Applicable ambient temperature: -10°C to 50°C.

规格型号及技术参数: Models, specifications and technical parameters

型号规格 Models and specifications	出口数 Outlet quantity	A	B	工作压力 Work pressure (MPa)	适用油品 Applicable oils	吐油量 Throughput (mL/cy)	重量 Weight (g)
GFG/GFH-02	2	63	/	3.0-8.0	NLGI 000	0.03/0.06/0.09/0.12	120
GFG/GFH-03	3	80	17				164
GFG/GFH-04	4	97	34				207
GFG/GFH-05	5	114	51				251
GFG/GFH-06	6	131	68				295
GFG/GFH-07	7	148	85				339
GFG/GFH-08	8	165	102				383

产品外形尺寸图 Product dimension figure



GFG/GFH 分配器工作原理图 Schematic diagram of the GFG/GFH distributor



GFG/GFH 分配器工作原理说明 Rationale of the GFG/GFH distributor

- 从润滑泵输送出的润滑油, 经GFG/GFH分配器中的伞形阀门开始往上推动。
- 当伞形阀把芯杆中心孔封闭后, 迫使活塞克服弹簧力开始上升。将上腔原先存储的润滑油排出。
- 当活塞移至上腔顶点时, 排油同时完成。
- 润滑泵停止供油时, 其泄压阀自动开启, 使主油管内压力油通过卸压阀回油。此时系统压力下降, 分配器中的活塞在弹簧的作用下开始复位, 当伞形阀复位时封闭分配器进油时, 则活塞把存储在下腔的润滑油通过芯杆小孔压送到上腔, 同时下次的供油也准备完毕。
- The lubrication oil delivered from the lubrication pump starts to push upward through the umbrella valve in the GFG/GFH distributor.
- When the umbrella valve closes the central hole of the core rod, the piston is forced to rise against the spring force. Drain the lubrication oil previously stored in the upper chamber.
- When the piston moves to the top of the upper chamber, the oil discharge is completed at the same time.
- When the lubrication pump stops supplying oil, its pressure relief valve opens automatically, so that the pressure oil in the main oil pipe reset to the oil through the pressure relief valve. At this time, the system pressure drops, and the piston in the distributor begins to recover under the action of the spring. When the umbrella valve reposition to close the distributor and enters the oil, the piston presses the lubrication oil stored in the lower chamber to the upper chamber through the small hole of the core rod., and the next fuel supply is also ready.



Progressive centralized grease lubrication system

递进式集中油脂润滑系统

递进式集中油脂润滑系统概述
Description of the Progressive centralized grease lubrication system

递进式油脂润滑系统由油脂滤油器、抵抗式油脂润滑泵（或递进式油脂润滑泵）、递进式分配器、铜接头、油管等组成。

Progressive centralized grease lubrication system consists of grease filter, resistance grease lubrication pump (or progressive type grease lubrication pump), the progressive distributor, copper fittings, oil pipe, etc.

1 系统特点

- 系统强制向每个润滑点注油。
- 给油量精准，出油量固定，不因油品黏度、温度变化而变化。
- 循环检测开关可通过设置脉冲信号来检测润滑系统的润滑状况。
- 系统中任何一个分配器出油孔出现不工作时，系统循环供油将会产生异常。

System features

- The system forces oil injection to each lubrication point.
- The oil is supplied accurately and ejected oil quantity is constant, which is not changed subject to oil viscosity and temperature.
- The cycle detection switch can detect the lubrication condition of the lubrication system by setting a pulse signal.
- When oil outlet of any distributor of the system does not work, cycle oil supply of the system may be fault.

2 系统配置注意

- 主管须用不锈钢管或高压橡胶油管。
- 为确保每次循环每个润滑点出油，一个出油口只能对应一个润滑点。

Attentions for system configurations

- The main oil pipe shall be made of stainless steel pipe or high-pressure rubber oil pipe.
- To ensure that oil is ejected to each lubrication point each point, one oil outlet is corresponding to one lubrication point.

3 安装使用注意

- 各连接油管口裁剪平整，确定连接完好不漏油。
- 安装时保证各管路内部清洁。
- 请使用正厂干净无杂质的NLGI 000-2油脂。
- 适用温度-40℃-70℃。
- 请从正确的加油孔加油，严禁打开抑油块从油杯上方加油。
- 注意使用环境温度变化，适当调整使用油品黏度。

Attentions for installation and use

- The oil outlet pipeline orifices shall be cut smooth, make sure the connection is intact and no oil leakage.
- In the process of installing, please ensure that interior of the pipeline is clean.
- Please use the correct, clean and impurity-free NLGI 000-2 oil grease.
- Applicable temperature -40℃-70℃.
- Please refill oil from the correct oil refilling orifice. Do not open the oil block to refill oil above the oil cup.
- Please notice environmental temperature, adjust viscosity of oil products.

4 基本适用范围

广泛适用于润滑点多，管路距离远(高)，给油量精准与每点必须强制给油的机械设备。

Basic scope of application

Extensively used for machinery and equipment with excessive lubrication points, distance pipelines, and accurate oil supply point for compulsory oil supply.

5 系统搭配递进式分配器

GPA、GPB、GPC、GPD、GPE递进式油脂分配器。

Systems with progressive distributor

The system is configured with progressive distributor. GPA, GPB, GPC, GPD, GPE Grease lubrication system.

6 该系统主机包括

柱塞泵类：GEN-1、GEO-1、GENH-1、GEOH-1、GEP-1、GET-S

The system is composed of

Piston pump: GEN-1, GEO-1, GENH-1, GEOH-1, GEP-1, GET-S

GTB-A1 型(Type)

数显油脂润滑泵 Digital Grease lubrication pump

■ 抵抗式油脂润滑泵(齿轮泵) Resistance-type grease lubrication pump (gear pump)



GTB-A1P3

Φ6 (主出油口)
Φ6 (Main oil outlet)
(套管帽 M10x1.0)
(Sleeve tube cap M10 x 1.0)
泵体螺纹 PT1/8
Pump body thread PT1/8

订货编制说明 Order description

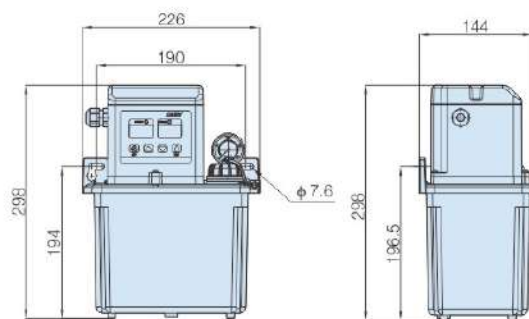
GTB-A1		□	□	□	□	□	□	□	□
压力开关 Pressure switch	液位开关 Liquid level switch	空白	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关
P 压力开关 ★	无液位开关	Blank	Without level monitor	Blank	Without level monitor	Blank	Without level monitor	Blank	Without level monitor
空白 无	有液位开关 (NPN) ★	T	with level monitor	T	with level monitor	T	with level monitor	T	with level monitor
油箱容积 Oil tank volume	出油口径 Outlet pipe diameter	3	3L	4	4L	6	接Φ6管	6	接Φ6管
3 3L ★	Connected to Φ6 pipe ★	4	4L	6	Connected to Φ6 pipe ★	6	Connected to Φ6 pipe ★	6	Connected to Φ6 pipe ★
电压 Voltage type	吐油量 Throughput	2	交流 220VAC, 50/60Hz ★	9	直流 24VDC ★	2	200mL/min ★	2	200mL/min ★
2 交流 220VAC, 50/60Hz ★		9	直流 24VDC ★	2	200mL/min ★	2	200mL/min ★	2	200mL/min ★

注: ★表示优选型号
Note: ★ indicates preferred model

性能与特点

- 系统可设定三种动作模式。
 - a、润滑: 开机时先执行润滑时间计时。
 - b、间歇: 润滑完成后执行间歇时间计时(时间单位可转换)。
 - c、记忆: 断电后再次送电可继续执行之前未完成的间歇时间。
- 润滑时间和间歇时间均可调整。(内设有锁键功能, 可锁定设置后的润滑和间歇时间)
- 设有液位开关、压力开关(可选配)。当油量或压力不足时蜂鸣器会发出报警、可将异常信号输出。a、压力不足显示Erp。b、液位不足显示Ero。
- 系统时间可设定, LUB润滑时间:1~999(秒)INT间歇时间:1~999(分)。(特殊要求可订制, 面板指示灯可显示出润滑泵的润滑和间歇状态)
- 系统使用“RST”键, 可强制润滑或消除异常报警信号。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。

产品外形尺寸图 Product dimension figure



GTB-A13

Performance and characteristics

- The system is configured with 3 action modes.
 - a lubrication: when turning on, execute lubrication timing.
 - b Intermittent: execute intermittent timing after lubrication is completed.
 - c Memory: in case of power on after power off, resume incomplete intermittent time.
- Lubrication time and intermittent time can be adjusted. (Built-in locking function, and lubrication and intermittent time after setting is locked).
- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
 - a When pressure is insufficient, Erp is displayed.
 - b When liquid level is insufficient, Ero is displayed.
- The system time can be configured, LUB lubrication time: 1~999 (seconds), INT intermittent time: 1~999 (minutes) (tailored if specially required) The panel indicator displays lubrication and intermittent status.
- The system uses RST key to force lubrication or eliminate abnormal reporting signal.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.

规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=8min)
(Work system S2=8min)

项目 Item 型号 Models	电压 voltage(V)	输出功率 Output power (W)	润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	吐出口径 throughput caliber (mm)	额定吐出压力 Rated throughput pressure (MPa)	吐油量 Throughput (mL/min)	压力 开关 Pressure Switch	油脂 传感器 grease sensor	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
GTB-A1	AC220 DC24	60 35	1~999	1~999	Φ6	2.0	200	有 Yes	可选配 Optional	有 Yes	3 4	NLGI 000	0~50℃

GTB-C1 型(Type)

PLC 油脂润滑泵 PLC grease lubrication pump

■ 抵抗式油脂润滑泵(齿轮泵) Resistance-type grease lubrication pump (gear pump)



GTB-C1P3

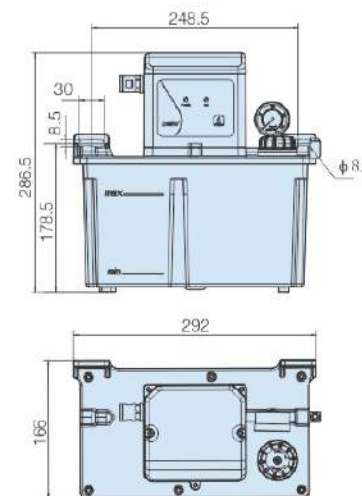
Φ6 (主出油口)
Φ6 (Main oil outlet)
(套管帽 M10x1.0)
(Sleeve tube cap M10 x 1.0)
泵体螺纹 PT1/8
Pump body thread PT1/8

订货编制说明 Order description

GTB-C1		□	□	□	□	□	□	□	□
压力开关 Pressure switch	液位开关 Liquid level switch	空白	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关	无液位开关
P 压力开关 ★	无液位开关	Blank	Without level monitor	Blank	Without level monitor	Blank	Without level monitor	Blank	Without level monitor
空白 无	有液位开关 (NPN) ★	T	with level monitor	T	with level monitor	T	with level monitor	T	with level monitor
油箱容积 Oil tank volume	出油口径 Outlet pipe diameter	3	3L	4	4L	6	接Φ6管	6	接Φ6管
3 3L ★	Connected to Φ6 pipe ★	4	4L	6	Connected to Φ6 pipe ★	6	Connected to Φ6 pipe ★	6	Connected to Φ6 pipe ★
电压 Voltage type	吐油量 Throughput	2	交流 220VAC, 50/60Hz ★	9	直流 24VDC	2	200mL/min	2	200mL/min
2 交流 220VAC, 50/60Hz ★		9	直流 24VDC	2	200mL/min	2	200mL/min	2	200mL/min

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



GTB-C14

性能与特点

- 设有液位开关、压力开关(可选配)。当油量或压力不足时可发出异常信号输出。
- 面板指示灯可显示出润滑泵的通电和润滑状态。系统中设有“FEED”键, 可强制润滑。
- 设有溢流阀, 可保护润滑泵及管路由于压力过高而损坏。
- 内部配有保险丝防止因短路导致电流过大烧坏IC板和电机。

Performance and characteristics

- Provided with liquid level switch and pressure switch (optional). When oil volume or pressure is insufficient, the beeper makes sound, send alarm and offers abnormal signal output.
- The panel indicator light indicates power and lubrication status of the oil injection mold. The system is provided with FEED key, and compulsory lubrication is applied.
- Overflow is provided to protect oil injector and pipeline from being damaged by high pressure.
- Internal fuse is provided to prevent IC board and motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

(工作制 S2=8min)
(Work system S2=8min)

项目 Item 型号 Models	电压 voltage(V)	输出功率 Output power (W)	润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	吐出口径 Oil outlet diameter (mm)	额定吐出压力 Rated throughput pressure (MPa)	最大吐出压力 Maximum throughput pressure (MPa)	吐油量 Throughput (mL/min)	压力 开关 Pressure Switch	油脂 传感器 grease sensor	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
GTB-C1	AC220 DC24	60 35	须和PLC系统连接 Shall be connected to the PLC system		Φ6	2.0	6.0	200	有 Yes	可选配 Optional	无 No	3 4	NLGI 000	0~50℃

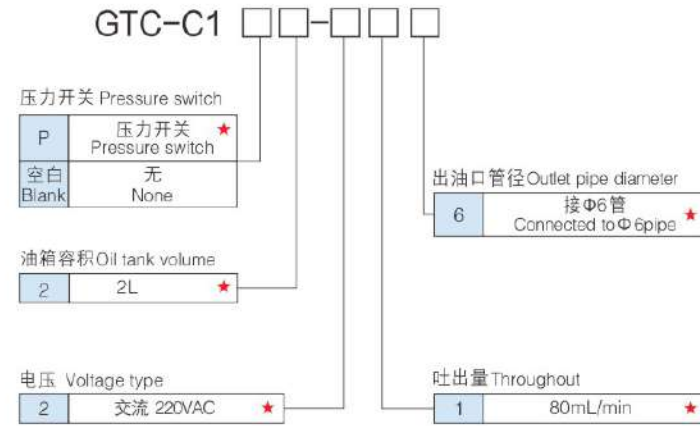
GTC-C1 型(Type)

PLC 油脂润滑泵 PLC grease lubrication pump

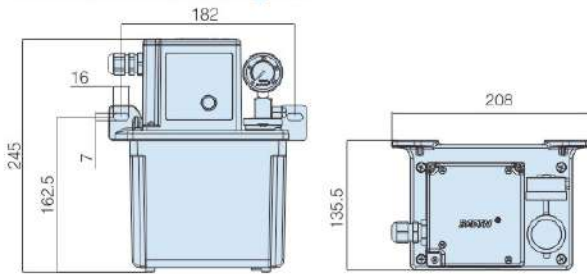
■ 抵抗式电动油脂润滑泵 (齿轮泵) Resistance-type electric grease lubrication pump (gear pump)



订货编制说明 Order description



产品外形尺寸图 Product dimension figure



性能与特点

- 压力开关(可选配),当压力不足时可将异常信号输出。
- 系统中设有“FEED”键,可强制润滑。
- 电机设有自我保护功能,防止电机温度过高或过载。
- 设有溢流阀,可保护注油机及管路由于压力过高而损坏。
- 内部配有保险丝防止短路导致电流过大烧坏电机。

Performance and characteristics

- Pressure switch (optional) are provided. When pressure is insufficient, abnormal signal is output.
- The system is provided with FEED key, and compulsory lubrication is applied.
- The motor is provided with self-protection to prevent high temperature and overload of motor.
- Overflow valve is provided to prevent damage by oil injector and pipeline.
- Internal fuse is provided to prevent motor damaged by short circuit.

规格型号及技术参数 Specifications, models and technical parameters

项目 Item 型号 Models	电机 Motor		控制功能 Control function	额定 压力 Rated pressure	最大输 出压力 Maximum output pressure	吐出量 Throughput (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力 开关 Pressure Switch	油箱容量 Oil tank volume (L)	适用油品 Applicable oils	适用温度 Applicable temperature
	电压 voltage (V)	输出功率 output power (W)		(MPa)							
GTC-C1	AC220V	20	由外部 PLC 控制 Controlled by an external PLC	2.0	4.0	80	Φ 6	可选配 Optional	2(树脂 Resin)	NLGI 000	0~50℃

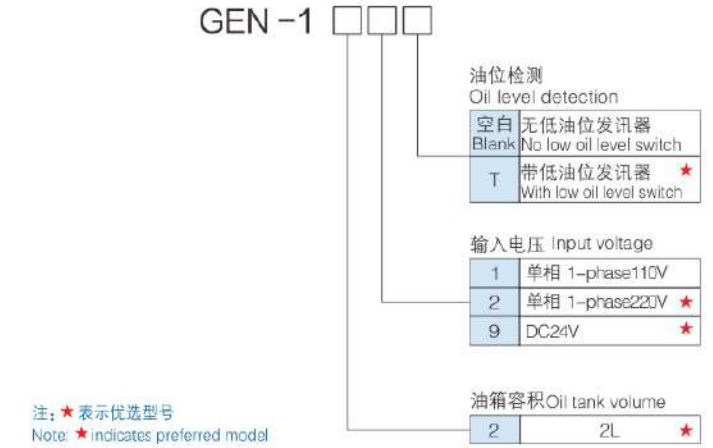
GEN-1 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 递进式油脂润滑泵(柱塞泵) Progressive-type grease lubrication pump (piston pump)

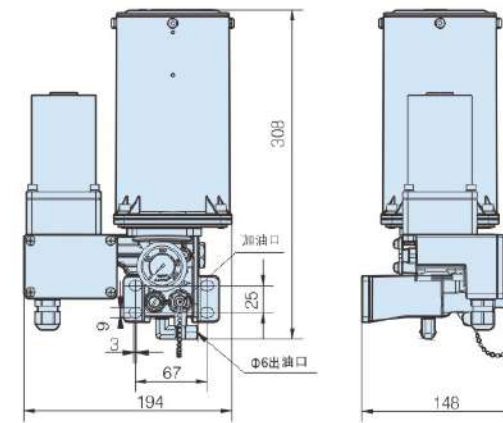


订货编制说明 Order description



注: * 表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 请使用加油枪通过油脂过滤器向润滑泵储油箱内添加油脂,可避免杂质,空气混入润滑系统,从而提高润滑系统使用效果。
- 采用弹簧式压油盘,真空吸油。
- 在递进式系统中无脱压阀装置,需配合GPA/GPB/GPC/GPD/GPE分配器使用(参考76-82页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- An exhaust valve device is provided to eliminate air from the lubrication pump chamber and ensure lubrication pump drain unblocked.
- With low oil level transmitter, normally open contacts or normally closed contacts can be selected according to the system. The standard model is a normally open contact.
- Use a grease gun to add grease to the lubrication pump reservoir through a grease filter to avoid impurities and air into the lubrication system to improve the lubrication system.
- A spring-loaded oil pan is used for vacuum suction.
- No pressure relief valve device in progressive system, used with GPA/GPB/GPC/GPD/GPE distributor (refer to pages 76-82).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力 (MPa) Rated pressure	吐出量 Throughput (mL/min)	出油口管径 (mm) Oil outlet diameter	油箱容量 (L) Oil tank volume	电机功率 (W) Motor power	适用油品 Applicable oils	适用温度 Applicable temperature
GEN-122	8.0	20	Φ 6	2	35	NLGI 000-0	-10℃~60℃
GEN-129	8.0	20	Φ 6	2	25	NLGI 000-0	

GEO-1 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 递进式油脂润滑泵(柱塞泵) Progressive-type grease lubrication pump (piston pump)

订货编制说明 Order description

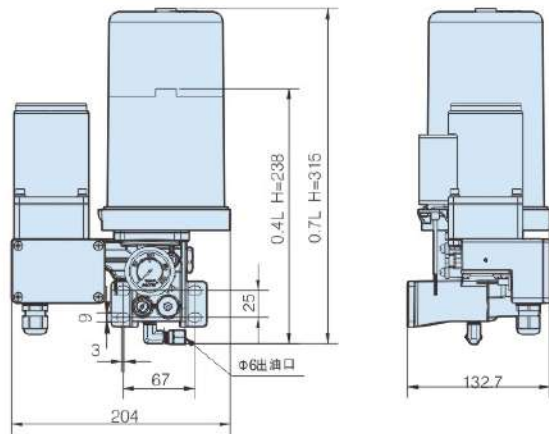


GEO -1

油位检测 Oil level detection	
空白 Blank	无低油位发讯器 No low oil level switch
T	带低油位发讯器 ★ With low oil level switch
输入电压 Input voltage	
1	单相 1-phase 110V
2	单相 1-phase 220V ★
9	DC24V ★
油箱容积 Oil tank volume	
7	0.7L ★
4	0.4L

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图
Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 采用罐装式油脂,可减少杂质,混入油脂内,更换方便,且不污染环境。
- 在抵抗式系统中无脱压阀装置,需配合GPA/GPB/GPC/GPD/GPE分配器使用(参考76-82页)。

Performance and characteristics

- The duty cycle of the lubrication pump can be controlled by the host PLC or a separate controller.
- Equipped with a pressure regulating valve device, the working pressure of the lubrication pump can be independently set to ensure safe operation.
- An exhaust valve arrangement is provided to eliminate lubrication of the air in the pump chamber and to ensure that the lubrication pump drains the oil smoothly.
- For low oil level transmitters, normally open or normally closed contacts can be selected depending on the system, The standard model is a normally open contact.
- The use of grease cartridge reduces impurities mixed into the grease, makes replacement easy, and does not pollute the environment.
- No pressure relief valve device in resistance system, used with GPA/GPB/GPC/GPD/GPE distributor(refer to pages 76~82).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	吐出量 Throughout (mL/min)	出油口径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	电机功率(W) Motor power	适用油品 Applicable oils	适用温度 Applicable temperature
GEO-172	8.0	20	Φ6	0.7	35	NLGI 000-0	-10°C~60°C
GEO-179	8.0	20	Φ6	0.7	25	NLGI 000-0	

GENH-1 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 递进式油脂润滑泵(柱塞泵) Progressive-type grease lubrication pump (piston pump)

订货编制说明 Order description

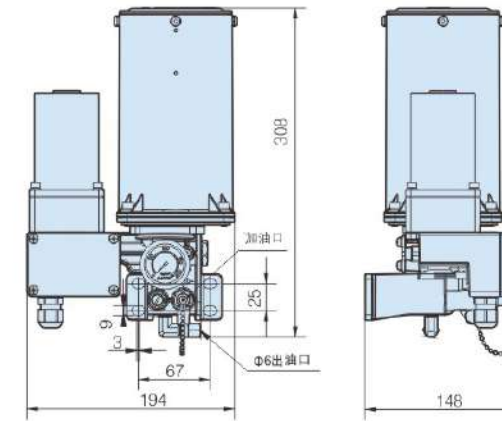


GENH -1

油位检测 Oil level detection	
空白 Blank	无低油位发讯器 No low oil level switch
T	带低油位发讯器 ★ With low oil level switch
输入电压 Input voltage	
2	单相 1-phase 220V ★
9	DC24V ★
油箱容积 Oil tank volume	
2	2L ★

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图
Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 请使用加油枪通过油脂过滤器向润滑泵储油箱内添加油脂,可避免杂质,空气混入润滑系统,从而提高润滑系统使用效果。
- 采用弹簧式压油盘,真空吸油。
- 在递进式系统中无脱压阀装置,需配合GPA/GPB/GPC/GPD/GPE分配器使用(参考76-82页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- An exhaust valve device is provided to eliminate air from the lubrication pump chamber and ensure lubrication pump drain unblocked.
- With low oil level transmitter, normally open contacts or normally closed contacts can be selected according to the system, The standard model is a normally open contact.
- Use a grease gun to add grease to the lubrication pump reservoir through a grease filter to avoid impurities and air into the lubrication system to improve the lubrication system.
- A spring-loaded oil pan is used for vacuum suction.
- No pressure relief valve device in progressive system, used with GPA/GPB/GPC/GPD/GPE distributor(refer to pages 76~82).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	吐出量 Throughout (mL/min)	出油口径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	电机功率(W) Motor power	适用油品 Applicable oils	适用温度 Applicable temperature
GENH-122	16.0	4.0	Φ6	2	20	NLGI 000-2	-10°C~60°C
GENH-129	16.0	5.0	Φ6	2	20	NLGI 000-2	

GEOH-1 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 递进式油脂润滑泵(柱塞泵) Progressive-type grease lubrication pump (piston pump)

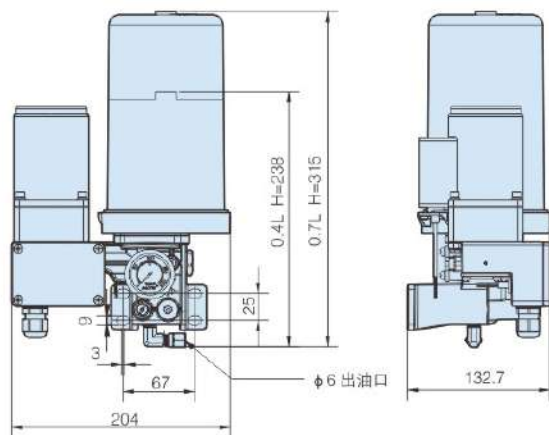
订货编制说明 Order description



油位检测 Oil level detection	
空白	无低油位发讯器 Blank No low oil level switch
T	带低油位发讯器 ★ With low oil level switch
输入电压 Input voltage	
2	单相 1-phase 220V ★
9	DC24V ★
油箱容积 Oil tank volume	
7	0.7L ★
4	0.4L

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图
Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 采用罐装式油脂,可减少杂质,混入油脂内,更换方便,且不污染环境。
- 在抵抗式系统中无脱压阀装置,需配合GPA/GPB/GPC/GPD/GPE分配器使用(参考76-82页)。

Performance and characteristics

- The duty cycle of the lubrication pump can be controlled by the host PLC or a separate controller.
- Equipped with a pressure regulating valve device, the working pressure of the lubrication pump can be independently set to ensure safe operation.
- An exhaust valve arrangement is provided to eliminate lubrication of the air in the pump chamber and to ensure that the lubrication pump drains the oil smoothly.
- For low oil level transmitters, normally open or normally closed contacts can be selected depending on the system, The standard model is a normally open contact.
- The use of grease cartridge reduces impurities mixed into the grease, makes replacement easy, and does not pollute the environment.
- No pressure relief valve device in resistance system, used with GPA/GPB/GPC/GPD/GPE distributor(refer to pages 76-82).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	额定压力(MPa) Rated pressure	吐出量 Throughput (mL/min)	出油口管径(mm) Oil outlet diameter	油箱容量(L) Oil tank volume	电机功率(W) Motor power	适用油品 Applicable oils	适用温度 Applicable temperature
GEOH-172	16.0	4.0	Φ6	0.7	20	NLGI 000-2	-10°C~60°C
GEOH-179	16.0	5.0	Φ6	0.7	20	NLGI 000-2	

GEP-1 型(Type)

电动油脂润滑泵 Electric grease lubrication pump

■ 递进式油脂润滑泵(柱塞泵) Progressive-type grease lubrication pump (piston pump)

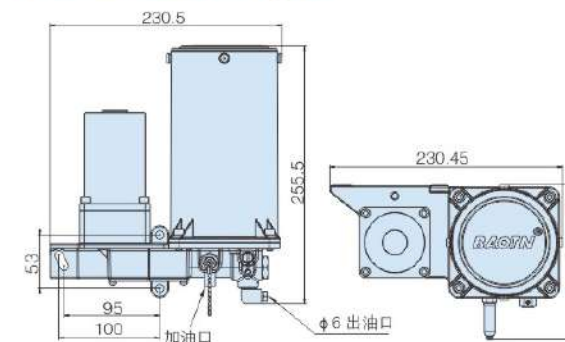
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低油位开关 Grease level switch	
空白	无油位开关 Without low level switch
T	带油位开关 ★ With low level switch
输入电压 Input voltage	
1	交流 110VAC, 50/60Hz
2	交流 220VAC, 50/60Hz ★
9	直流 24VDC ★
油箱容积 Oil tank volume	
2	2L ★

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图
Product dimension figure



性能与特点

- 可通过主机PLC或独立控制器控制润滑泵工作周期。
- 设有调压阀装置,可自主设定润滑泵的工作压力,保障其工作安全。
- 润滑系统设置压力开关,可有效监控润滑系统管路中断流,渗漏等压力不足现象。
- 设有排气阀装置,可排除润滑泵腔内的空气,确保润滑泵排油畅通。
- 设有低油位发讯器,常开触点或常闭触点可根据系统选择,标准款为常开触点。
- 采用弹簧式压油盘,真空吸油。
- 请使用加油枪通过油脂过滤器向润滑泵储油箱内添加油脂,可避免杂质,空气混入润滑系统,从而提高润滑系统使用效果。
- 在抵抗式系统中无脱压阀装置,需配合GPA/GPB/GPC/GPD/GPE分配器使用(参考76-82页)。

Performance and characteristics

- The lubrication pump duty cycle can be controlled by the host PLC or a separate controller.
- It is equipped with a pressure regulating valve device, which can independently set the working pressure of the lubrication pump to ensure its safety.
- The lubrication system is equipped with a pressure switch, which can effectively monitor the pipeline system to interrupt the flow, leakage and other pressure shortage phenomenon.
- An exhaust valve device is provided to eliminate the air in the lubrication pump chamber and ensure that the lubrication pump drains oil smoothly.
- For low oil level transmitters, normally open or normally closed contacts can be selected depending on the system, The standard model is a normally open contact.
- A spring-loaded oil pan is used for vacuum suction.
- Use a grease gun to add grease to the lubrication pump reservoir through the grease filter to avoid impurities and air into the lubrication system to improve the lubrication system.
- No pressure relief valve device in resistance system, used with GPA/GPB/GPC/GPD/GPE distributor(refer to pages 76-82).

规格型号及技术参数 Specifications, models and technical parameters

型号 Model	流量(mL/min) flow	电压(V) voltage	电机功率(W) Motor Power	油箱容量(L) oil tank volume	出油口管径(mm) oil outlet diameter	额定吐出压力(MPa) Rated throughput pressure	适用油品 Applicable oils	适用温度 Applicable temperature
GEP-121T	20	单相110	35	2	Φ6	8.0	NLGI 000-0	-10°C~60°C
GEP-122T		单相220	35					
GEP-129T		DC24	25					

GEF 型(Type)

手动加油枪 Manual grease gun



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GEF-10 □ □

包装类型 Type of packaging	
空白 Blank	塑胶袋 Plastic bag
A	泡沫盒 Foam box
接管类型 Takeover type	
N	尼龙管 Nylon tube
Z	橡胶软管 Rubber hose

10: 表示公称流量 单位: 10mL/cy
10: Represents the nominal flow Unit: 10mL/cy

规格型号及技术参数

Specifications, models and technical parameters

技术参数 Technical parameters	型号 Model	GEF-10N□	GEF-10Z□
公称流量 Nominal flow mL/cy		10	10
公称压力 Nominal pressure MPa		2.0	4.0
加油嘴形式 Fuel nozzle type		直通式加油嘴 straight nozzle	

GEJ 型(Type)

手动黄油机 Manual grease machine



GEJ-801

项目 project 型号 Model	加油嘴形式 Fuel nozzle type	长度 length (mm)	杆长 Pole length (mm)	管径 Pipe diameter (mm)	容量 capacity (mL)	最大压力 greatest pressure (PSI/MPa)	工作压力 Work pressure (PSI/MPa)	最大出油量 Maximum infestation (mL/cy)	拉杆形式 Tie rod form
GEJ-801	黄油嘴 Grease nipples	380	320	φ56	500	10000/69	8000/55	1	加油拉杆 Refueling rod
GEJ-802		430	320	φ56	600	10000/69	8000/55	2	
GEJ-803		430	320	φ56	600	10000/69	8000/55	1	
GEJ-804		380	320	φ56	600	10000/69	8000/55	1	链式拉杆 Chain link

GEK 型(Type)

气动黄油机 Pneumatic grease machine



项目 project 型号 Model	加油嘴形式 Fuel nozzle type	出油压力 Output pressure (MPa)	进气压力 Intake pressure (MPa)	压力比 Pressure ratio	出油量 Oil output (L/min)	容积 Volume (L)	净重 Net weight (KG)	进气管规格 Intake pipe specifications	包装尺寸 Packing size (mm)
GEK-85	--	30-40	0.6-0.8	50:1	0.85	--	10	四分之一 Quarter	1000*220*150
GEK-85TK	快插接头 Quick connector (GB-T 5860.6.3B LSQ-S2-02SF G1/4)	30-40	0.6-0.8	50:1	0.85	30	18.8	四分之一 Quarter	455*455*735
GEK-85TY	直通式加油嘴 straight nozzle	30-40	0.6-0.8	50:1	0.85	30	18.8	四分之一 Quarter	455*455*735

注: GEK-85可直接放置标准黄油桶 note: GEK-85 can be directly placed in a standard butter bucket

GPA 型(Type)

油脂分配器 Progressive grease distributor

■ 递进式油脂分配器 Grease lubrication distributor

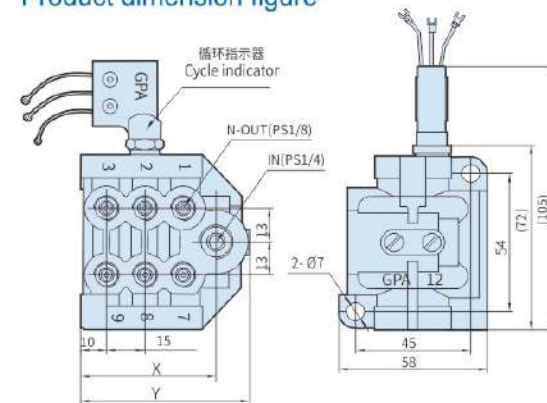


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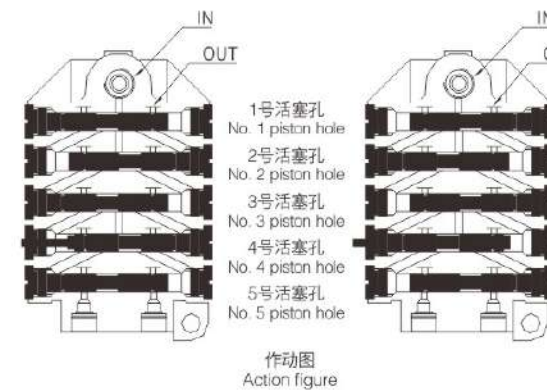
GPA- □ □

出口数 Quantity of oil outlets	空白 Blank	不带循环指示器 Without piston detector
	M	带循环指示器 With piston detector
2~12	出口数为2-12位 The oil outlet is at position 2-12.	

产品外形尺寸图 Product dimension figure



GPA型黄油分配器
GPA type butter dispenser



GPA型号 及技术参数 Model GPA and technical parameters

型号 Model	检测开关 Detecting switch	出口数 Outlet quantity	X	Y	重量(g) Weight
GPA-2	无 NO	2	38	51	300
GPA-4		4	38	51	300
GPA-6		6	38	51	300
GPA-8		8	38	51	300
GPA-10		10	53	66	400
GPA-12	12	53	66	400	

概述

递进式分配器, 是一款设计先进、结构合理的油量分配器。它能够与手动、电动、气动润滑泵等组成单线润滑系统, 适用于各种中小型机床和塑料机械设备, 以及相似应用场合的理想产品。一组GPA分配器通常可提供4、6、8、10或12个润滑点的润滑。GPA分配器只有0.3mL/cy一种规格的排量。

※注: 对于分配器的出油口, 不能堵塞任一出口, 否则会影响其正常工作, 损坏分配器。

Overview

The progressive butter dispenser is an oil dispenser with advanced design and reasonable structure. It can form a single-line lubrication system with manual, electric and pneumatic lubrication pumps, etc. It is an ideal product for various small and medium-sized machine tools and plastic machinery and equipment, as well as similar applications. A set of GPA distributors typically provides 4, 6, 8, 10 or 12 lubrication points for lubrication. The GPA distributor only has a displacement of 0.3mL/cy.

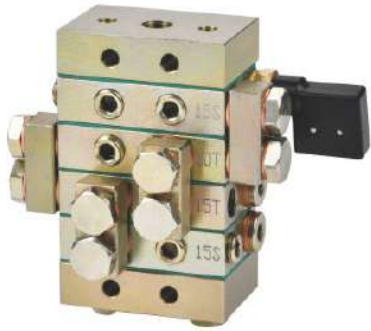
※ Note: For the oil outlet of the distributor, do not block any oil outlet, otherwise it will affect its normal operation and damage the distributor.

GPA 分配器技术参数说明

- 最大公称压力: 6MPa。
- 标准排量: 0.3mL/cy。
- 适用润滑剂范围(在标准温度下): 稀油润滑油≥R68号, 润滑脂NLGI000-0。
- 工作环境温度: -10℃~+60℃。
- 装有机械式循环指示器的柱塞副最高循环速率: 60cy/min。
- 柱塞副最高循环速率: 200cy/min。
- 每组分器器可供润滑点数: 4、6、8、10、12。
- 分配器输出的最佳管径与长度: φ4mm长0.5~2.5m。
- 壳体材料: 铝合金。

Notes to technical parameters of the GPA distributor

- Maximum nominal pressure: 6MPa.
- Standard displacement: 0.3mL/cy.
- Applicable lubricant range (under standard temperature): thin oil lubrication oil ≥ R68, grease NLGI000-0.
- Working environment temperature: -10℃~+60℃.
- The maximum cycle rate of the Piston pair equipped with the mechanical cycle indicator: 60cy/min.
- The maximum circulation rate of the Piston pair: 200cy/min.
- The number of lubrication points available for each group of distributors: 4, 6, 8, 10, 12.
- The optimal diameter and length of the distributor output: φ4mm, 0.5~2.5m long.
- Housing material: aluminum alloy.



订货编制说明 Order description

GPB - □/□□ - □/.....□□

实际出口口数 Actual number of oil outlets

工作片数 Number of work

03	3片 pieces.
04	4片 pieces.
05	5片 pieces.

注: 工作片数可定做3-10片
Note: The number of working pieces can be customized 3~10 pieces

循环开关方式 Cycle switch mode

空白 Blank	不带指示棒 Without piston indicator
R	带指示棒 With piston indicator
M	带循环检测微动开关 With piston limit switch
D	带循环检测电子开关 With piston electric detector

出口管径 Outlet pipe diameter

4	接Φ4管 Connected to Φ4 pipe
6	接Φ6管 Connected to Φ6 pipe

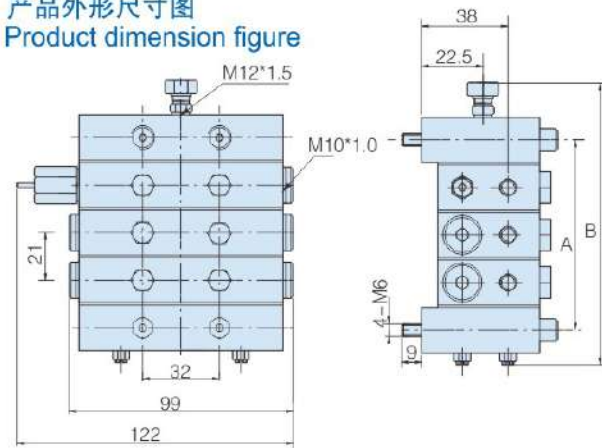
入口管径 Enter pipe diameter

6	接Φ6管 Connected to Φ6 pipe
8	接Φ8管 Connected to Φ8 pipe

工作片规格标记符 Worksheet Spec Marker

例: D30SL

产品外形尺寸图 Product dimension figure



工作片数 number	A(mm)	B(mm)	工作片数 number	A(mm)	B(mm)
3	89.4	143	7	171.8	223
4	110	163	8	192.4	244
5	130.6	183	9	213	264
6	151.2	203	10	233.6	284

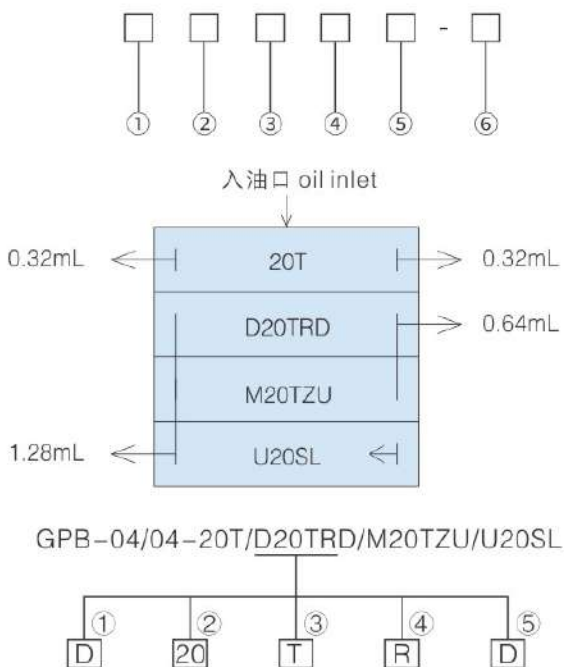
※注: A和B为理论值, 由于分配器装配存在累计误差, 会与实际尺寸有所出入。
※ Note: A and B are theoretical values, due to the cumulative deviation of the distributor assembly, may vary from actual size.

※注:

- 大于或等于规格 15T 或 15S 的阀片上, 才可装循环指示器。
- 可用乘积方式表示多个相邻且相同规格的工作片, 如: GPB-07/04-20T*3/20SL-66。
- 用户需改变进、出油管直径, 请在订货时说明。
- 用户在任何情况下, 不得将分配器的出口口封堵, 以免超压损坏分配器。
- 工作片最少成组为3片, 最多成组为10片。
- 为保证分配器的标准安装, 请在安装处预留首片(或尾片)上的两个安装螺孔, 待现场安装再依据实物配钻其余的两个。

※ Note

- The cycle indicator can only be installed on the valve plate with a size greater than or equal to 15T or 15S.
- Multiple adjacent work pieces of the same specification can be represented by multiplication, such as: GPB-07/04-20T*3/20SL-66.
- Users need to change the diameter of the inlet and outlet pipes, please specify when ordering.
- The user must not block the oil outlet of the distributor under any circumstances, so as not to damage the distributor due to overpressure.
- The minimum number of working pieces is 3 pieces, and the maximum group is 10 pieces.
- In order to ensure the standard installation of the distributor, please reserve two installation screw holes on the first piece (or tail piece) at the installation place, and then drill the remaining two according to the actual object after on-site installation.



概述

GPB系列递进式分配器, 是一种设计先进、结构合理的油量分配器。GPB分配器系列可以用于高压和宽温度变化的工况, 它能够与手动、电动、气动泵等组成单线润滑系统, 适用于各种中型机床和塑料机械设备, 或大型单线润滑系统的子分配器, 以及相似应用场合的理想产品。

一组典型的GPB分配器包括由一片“首片”、一片“尾片”和3至10工作片构成。通常一组分配器可提供为3至20个润滑点的润滑。GPB分配器的工作片, 有各种规格的排量(详见技术规格)。双出口工作片(在工作片的规格数值后, 用T表示双出口), 有两个出口, 分别在工作片的两端; 单出口工作片(在工作片规格数值后, 用S表示单出口)有一个出口, 它可以在工作片的任一端, 而另一端出口处则需要堵塞。注意对于双出口工作片, 不能堵塞任一出口, 否则会损坏分配器, 影响其正常工作。

技术参数

- 最大工作压力: 25MPa
- 最小启动压力: 1.4MPa
- 单口标准排量: 0.08mL/cy~0.56mL/cy
- 适用润滑剂范围(在标准温度下): 润滑油≥N68号, 润滑脂NLGI 000~2
- 工作环境温度: -20℃~+60℃(低温时应使用低温脂)
- 装有机械式循环指示器的柱塞副最高循环速率: 60cy/min
- 柱塞副最高循环速率: 200cy/min
- 每组分配器工作片数: 3~10片
- 每组分配器可供润滑点数: 2~20点
- 分配器输出的最佳管径与长度: Φ6mm长1.2~3.5m; Φ8mm长1.5~4.5m
- 阀体材料及镀层: 碳钢表面镀锌

工作片标记符

- ①⑤分配器(片)相邻给油口上下合并状态标记:
U: 表示该出口与相邻上片给油口合并。
M: 表示该出口与相邻上片、相邻下片给油口同时合并。
D: 表示该给油口与相邻下片给油口合并。
空白: 表示不与相邻上下片给油口合并。
- ②分配器(片)给油量规格代号:
05——0.08mL/cy; 10——0.16mL/cy;
15——0.24mL/cy; 20——0.32mL/cy;
25——0.40mL/cy; 30——0.48mL/cy;
35——0.56mL/cy。
- ③分配器(片)左右给油口合并状态标记:
S: 表示该片左右给油口合并。
T: 表示左右油口不合并。
- ④分配器(片)给油口状态标记:
空白: 表示该片左、右侧均设给油口。
Z: 表示该片不设给油口。
L: 表示该片单出口, 左侧设置给油口。
R: 表示该片单出口, 右侧设置给油口。
- ⑥循环指示器组装位置:
L: 表示该片设有指示器且装在该片左端。
R: 表示该片设有指示器且装在该片右端。
空白: 表示该片不设指示器。

Overview

GPB series progressive distributor is an oil distributor with advanced design and reasonable structure. The GPB distributor series can be used for high pressure and wide temperature change conditions. It can form a single-line lubrication system with manual, electric and pneumatic pumps, etc. It is suitable for various medium-sized machine tools and plastic machinery equipment, or sub-distribution of large single-line lubrication systems, devices, and ideal products for similar applications.

A typical set of GPB distributors consists of a "first piece", a "tail piece" and 3 to 10 working pieces. Typically a set of dispensers provides lubrication for 3 to 20 lubrication points. The working pieces of the GPB distributor are available in various sizes of displacement (see technical specifications for details). Double oil outlet working piece (after the specification value of the working piece, use T to indicate double oil outlet), there are two oil outlets, respectively at both ends of the working piece; single oil outlet working piece (in the working piece specification after the value, use S for single oil outlet) There is an oil outlet, which can be at either end of the working piece, and the oil outlet at the other end needs to be blocked. Note that for the double oil outlet working piece, any oil outlet cannot be blocked, otherwise the distributor will be damaged and its normal operation will be affected.

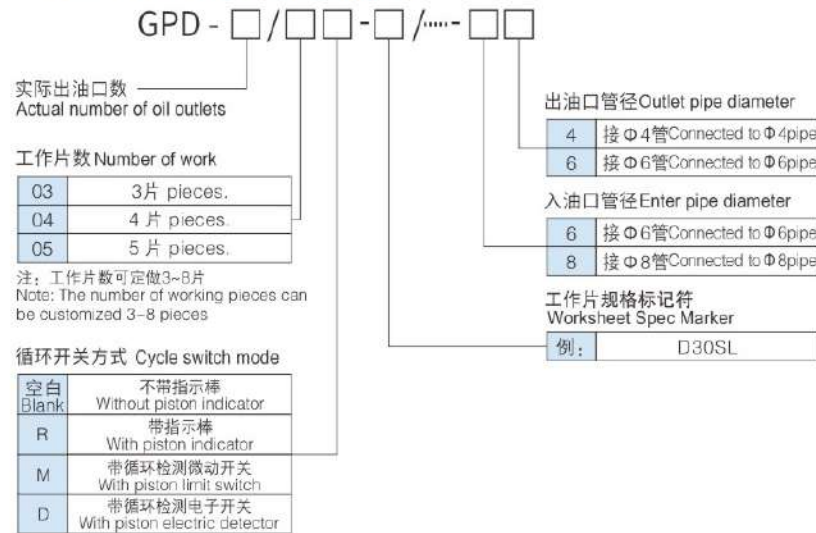
Technical parameter

- Maximum working pressure: 25MPa
- Minimum starting pressure: 1.4MPa
- Standard displacement per port: 0.08mL/cy~0.56mL/cy
- Applicable lubricant range (at standard temperature): lubrication oil ≥ N68, grease NLGI 000~2
- Working environment temperature: -20℃~+60℃ (low temperature grease should be used at low temperature)
- Piston pair with mechanical cycle indicator Maximum cycle rate: 60cy/min
- Maximum circulation rate of Piston pair: 200cy/min
- Number of working pieces of each group of distributors: 3~10 pieces
- The number of lubrication points available for each group of distributors: 2~20 points
- The optimal diameter and length of the distributor output: Φ6mm long 1.2~3.5m; Φ8mm long 1.5~4.5m
- Body material and coating: galvanized carbon steel surface

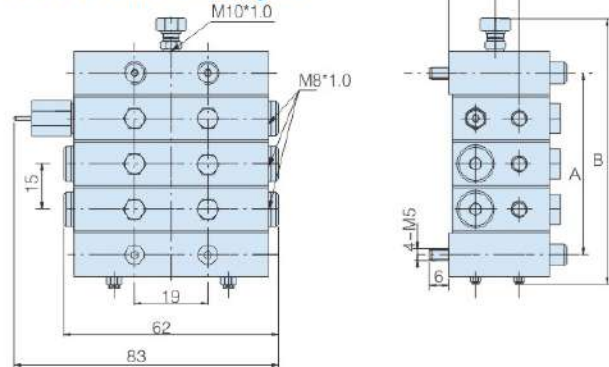
Worksheet marker

- ①⑤Distributor (slice) adjacent oil supply port upper and lower merge status mark:
U: Indicates that the oil outlet is merged with the oil supply port of the adjacent upper piece.
M: Indicates that the oil outlet is merged with the adjacent upper and lower oil feed ports at the same time.
D: Indicates that the oil supply port is merged with the adjacent lower plate oil supply port.
Blank: Indicates that it is not merged with the oil supply ports of the adjacent upper and lower parts.
- ②The oil supply specification code of the distributor (piece):
05——0.08mL/cy; 10——0.16mL/cy;
15——0.24mL/cy; 20——0.32mL/cy;
25——0.40mL/cy; 30——0.48mL/cy;
35——0.56mL/cy.
- ③The combined status mark of the left and right oil supply ports of the distributor (piece):
S: Indicates that the left and right oil feed ports of the film are combined.
T: Indicates that the left and right ports are not merged.
- ④Distributor (piece) to oil port status mark:
Blank: Indicates that the left and right sides of the film are provided with oil supply ports.
Z: Indicates that the film has no oil supply port.
L: Indicates that the chip has a single outlet, and the oil supply port is set on the left side.
R: Indicates that the chip has a single outlet, and the oil supply port is set on the right side.
- ⑥Cycle indicator assembly position:
L: Indicates that the piece is equipped with an indicator and is installed at the left end of the piece.
R: Indicates that the sheet is provided with an indicator and is mounted on the right end of the sheet.
Blank: Indicates that there is no indicator for this slice.

订货编制说明 Order description



产品外形尺寸图 Product dimension figure



工作片数 number	A(mm)	B(mm)	工作片数 number	A(mm)	B(mm)
3	59.5	79.5	6	105	124
4	74.5	94.5	7	120	138.5
5	89.5	109	8	135	153.5

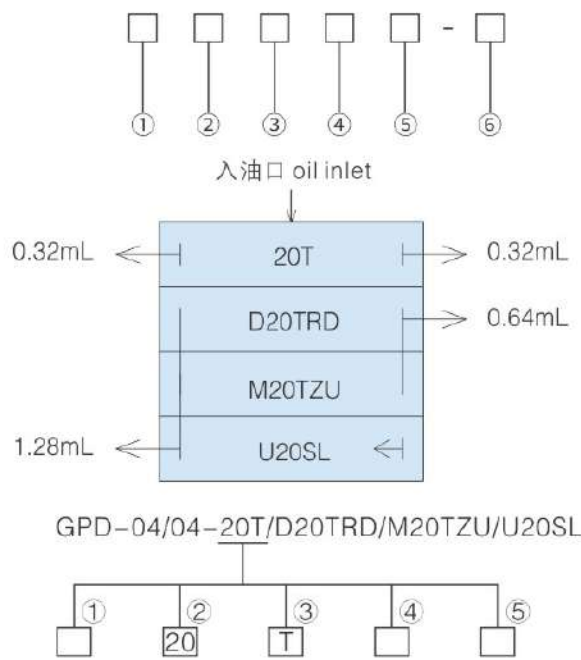
※注: A和B为理论值,由于分配器装配存在累计误差,会与实际尺寸有所出入。
※ Note: A and B are theoretical values, due to the cumulative deviation of the distributor assembly, may vary from actual size.

※注:

- 大于或等于规格 15T 或 15S 的阀片上,才可装循环指示器。
- 可用乘积方式表示多个相邻且相同规格的工作片,如: GPD-07/04-20T*3/20SL-66。
- 用户需改变进、出油管直径,请在订货时说明。
- 用户在任何情况下,不得将分配器的出口口封堵,以免超压损坏分配器。
- 工作片最少成组为3片,最多成组为10片。
- 为保证分配器的标准安装,请在安装处预留首片(或尾片)上的两个安装螺孔,待现场安装再依据实物配钻其余的两个。

※Note

- The cycle indicator can only be installed on the valve plate with a size greater than or equal to 15T or 15S.
- Multiple adjacent work pieces of the same specification can be represented by multiplication, such as: GPD-07/04-20T*3/20SL-66.
- Users need to change the diameter of the inlet and outlet pipes, please specify when ordering.
- The user must not block the oil outlet of the distributor under any circumstances, so as not to damage the distributor due to overpressure.
- The minimum grouping of working pieces is 3 pieces, and the maximum grouping is 10 pieces.
- In order to ensure the standard installation of the dispenser, please reserve two mounting screw holes on the first piece (or tail piece) at the installation place, and then drill the remaining two according to the food after on-site installation.



概述

GPD系列递进式分配器,是一种设计先进、结构合理的油量分配器。GPD分配器系列可以用于高压和宽温度变化的工况,它能够与手动、电动、气动泵等组成单线润滑系统,适用于各种中型机床和塑料机械设备,或大型单线润滑系统的子分配器,以及相似应用场合的理想产品。

一组典型的GPD分配器包括由一片“首片”、一片“尾片”和3至8工作片构成。通常一组分配器可提供为3至16个润滑点的润滑。GPD分配器的工作片,有各种规格的排量(详见技术规格)。双出口工作片(在工作片的规格数值后,用T表示双出口),有两个出口,分别在工作片的两端;单出口工作片(在工作片规格数值后,用S表示单出口)有一个出口,它可以在工作片的任一端,而另一端出口处则需要堵塞。注意对于双出口工作片,不能堵塞任一出口,否则会损坏分配器,影响其正常工作。

技术参数

- 最大工作压力: 16MPa
- 最小启动压力: 1.4MPa
- 单口标准排量: 0.08mL/cy~0.32mL/cy
- 适用润滑剂范围(在标准温度下): 润滑油≥N68, 润滑脂NLGI 000~2
- 工作环境温度: -20℃~+60℃(低温时应使用低温脂)
- 装有机械式循环指示器的柱塞副最高循环速率: 60cy/min
- 柱塞副最高循环速率: 200cy/min
- 每组分配器工作片数: 3~10片
- 每组分配器可供润滑点数: 2~20点
- 分配器输出的最佳管径与长度: Φ4mm长0.5~2.5m; Φ6mm长1.2~3.5m
- 阀体材料及镀层: 碳钢表面镀锌

工作片标记符

- ① 分配器(片)相邻给油口上下合并状态标记:
U: 表示该出口与相邻上片给油口合并。
M: 表示该出口与相邻上片、相邻下片给油口同时合并。
D: 表示该给油口与相邻下片给油口合并。
空白: 表示不与相邻下片给油口合并。
- ② GPD分配器(片)给油量规格代号:
05—0.08mL/cy;
10—0.16mL/cy;
15—0.24mL/cy;
20—0.32mL/cy;
- ③ 分配器(片)左右给油口合并状态标记:
S: 表示该片左右给油口合并。
T: 表示左右油口不合并。
- ④ 分配器(片)给油口状态标记:
空白: 表示该片左、右侧均设给油口。
Z: 表示该片不设给油口。
L: 表示该片单出口,左侧设置给油口。
R: 表示该片单出口,右侧设置给油口。
- ⑥ 循环指示器组位置:
L: 表示该片设有指示器且装在该片左端。
R: 表示该片设有指示器且装在该片右端。
空白: 表示该片不设指示器。

Overview

GPD series progressive distributor is an oil distributor with advanced design and reasonable structure. The GPD distributor series can be used for high pressure and wide temperature changes. It can form a single-line lubrication system with manual, electric and pneumatic pumps, etc. It is suitable for various medium-sized machine tools and plastic machinery equipment, or sub-distribution of large single-line lubrication systems, devices, and ideal products for similar applications.

A typical set of GPD distributors consists of a 'first piece', a 'tail piece' and 3 to 8 working pieces. Typically a set of distributors provides lubrication for 3 to 16 lubrication points. The work piece of the GPD distributor is available in various sizes of displacement (see technical specifications for details). Double oil outlet working piece (after the specification value of the working piece, use T to indicate double oil outlet), there are two oil outlets, respectively at both ends of the working piece; single oil outlet working piece (in the working piece specification After the value, use S for single oil outlet) There is an oil outlet, which can be at either end of the working piece, and the oil outlet at the other end needs to be blocked. Note that for the double oil outlet working piece, any oil outlet cannot be blocked, otherwise the distributor will be damaged and its normal operation will be affected.

Technical parameter

- Maximum working pressure: 16MPa
- Minimum starting pressure: 1.4MPa
- Standard displacement per port: 0.08mL/cy~0.32mL/cy
- Applicable lubricant range (at standard temperature): lubrication oil ≥ N68, grease NLGI 000~2
- Working environment temperature: -20℃~+60℃ (low temperature grease should be used at low temperature)
- Piston pair with mechanical cycle indicator Maximum cycle rate: 60cy/min
- Maximum circulation rate of Piston pair: 200cy/min
- Number of working pieces of each group of distributors: 3~10 pieces
- The number of lubrication points available for each group of distributors: 2~20 points
- The optimal pipe diameter and length of the distributor output: Φ4mm long 0.5~2.5m; Φ6mm long 1.2~3.5m
- Body material and coating: galvanized carbon steel surface

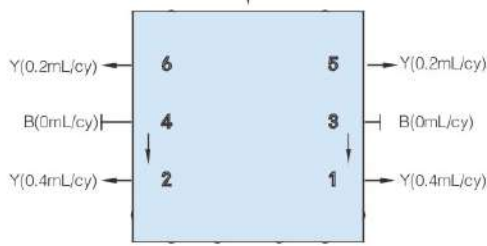
Worksheet marker

- ① 分配器(片)相邻给油口上下合并状态标记:
U: Indicates that the oil outlet is merged with the oil supply port of the adjacent upper piece.
M: Indicates that the oil outlet is merged with the adjacent upper and lower oil feed ports at the same time.
D: Indicates that the oil supply port is merged with the adjacent lower plate oil supply port.
Blank: Indicates that it is not merged with the oil feed port of the adjacent lower piece.
- ② GPD distributor (piece) specification code for oil supply:
05—0.08mL/cy;
10—0.16mL/cy;
15—0.24mL/cy;
20—0.32mL/cy;
- ③ The combined status mark of the left and right oil supply ports of the distributor (piece):
S: Indicates that the left and right oil feed ports of the film are combined.
T: Indicates that the left and right ports are not merged.
- ④ Distributor (piece) to oil port status mark:
Blank: Indicates that the left and right sides of the film are provided with oil supply ports.
Z: Indicates that the film has no oil supply port.
L: Indicates that the chip has a single outlet, and the oil supply port is set on the left side.
R: Indicates that the chip has a single outlet, and the oil supply port is set on the right side.
- ⑥ Cycle indicator assembly position:
L: Indicates that the piece is equipped with an indicator and is installed at the left end of the piece.
R: Indicates that the sheet is provided with an indicator and is mounted on the right end of the sheet.
Blank: Indicates that there is no indicator for this slice.

■ 递进式油脂分配器 Grease lubrication distributor

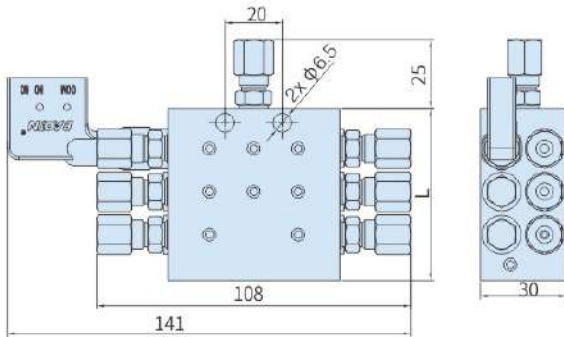


进油口接直通卡套式6mm接头
The oil inlet is connected to a straight-through ferrule type 6mm connector.



例: GPC-04/06-YYBBYY-6/61
说明: 出油口接头为卡套式6mm

产品外形尺寸图 Product dimension figure

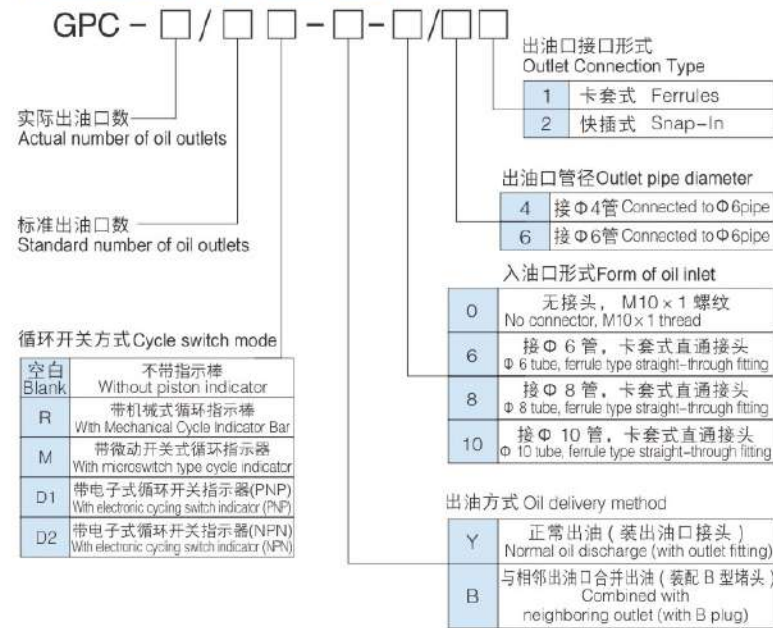


技术参数 Technical parameter

- 最大工作压力: 35MPa
- 最小启动压力: 1.4MPa
- 标准排量: 0.2mL/cy
- 工作环境温度: -20°C~+80°C
- 适用润滑剂范围(在标准温度下)NLGI 000-2; ≥N68号
- Maximum working pressure: 35MPa
- Minimum starting pressure: 1.4MPa
- Standard displacement: 0.2mL/cy
- Working temperature: -20°C~+80°C
- Applicable lubricant range (at standard temperature) NLGI 000-2; ≥N68

出油口数 Number of oil outlets	6	8	10	12	14	16	18	20
L	60	75	90	105	120	135	150	165

订货编制说明 Order description



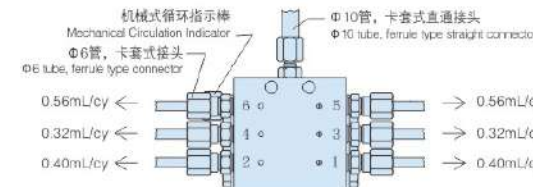
概述

整体式递进式分配器GPC可在集中润滑系统中为各润滑点提供计量润滑, 具有节能、高效的优点, 最多可设20个出油口, 工作压力高, 防尘防腐, 适用于恶劣环境的工况, 是车辆、工程机械、机床、风力发电机、塑料机械等集中润滑的理想产品。单出口排量为0.2mL/cy, 可以通过拆除堵头和钢球以及更换出油堵塞(B型堵头), 提供0.2mL/cy整数倍排量。当润滑剂从进油口进入分配器, 分配器就会以递进式的方式连续运行, 并以恒定的排量排油。一旦润滑剂停止流动, 分配器中的所有柱塞也将停止运动。通过安装特定的指示器观察一个出油口柱塞的运动, 便可监测整个分配器的运行状况。一旦发生堵塞, 便可实现报警。

Overview

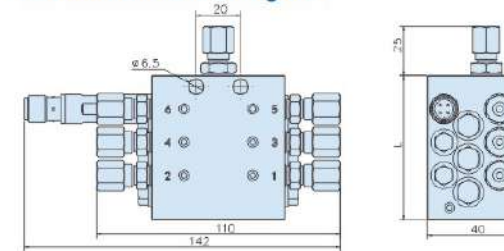
Integral progressive distributor GPC can provide metered lubrication for each lubrication point in the centralized lubrication system, with the advantages of energy saving and high efficiency, up to 20 outlets, high working pressure, dust and corrosion prevention, suitable for harsh environmental conditions, it is the ideal product for centralized lubrication of vehicles, construction machinery, machine tools, wind turbines, plastic machinery and so on. The single outlet displacement is 0.20mL/cy, and it can provide 0.2mL/cy integer multiple displacement by removing the plug and steel ball and replacing the oil outlet plug (B plug). As the lubricant enters the distributor from the inlet, the distributor operates continuously in a progressive manner and discharges oil at a constant displacement. Once the lubricant stops flowing, all Pistons in the distributor will also stop moving. The operation of the entire distributor can be monitored by installing a specific indicator to observe the movement of one outlet Piston. In the event of a blockage, an alarm can be realized.

■ 递进式油脂分配器 Grease lubrication distributor



举例: GPE-06/06R-YYYYY-EDG-10/61

产品外形尺寸图 Product dimension figure



技术参数

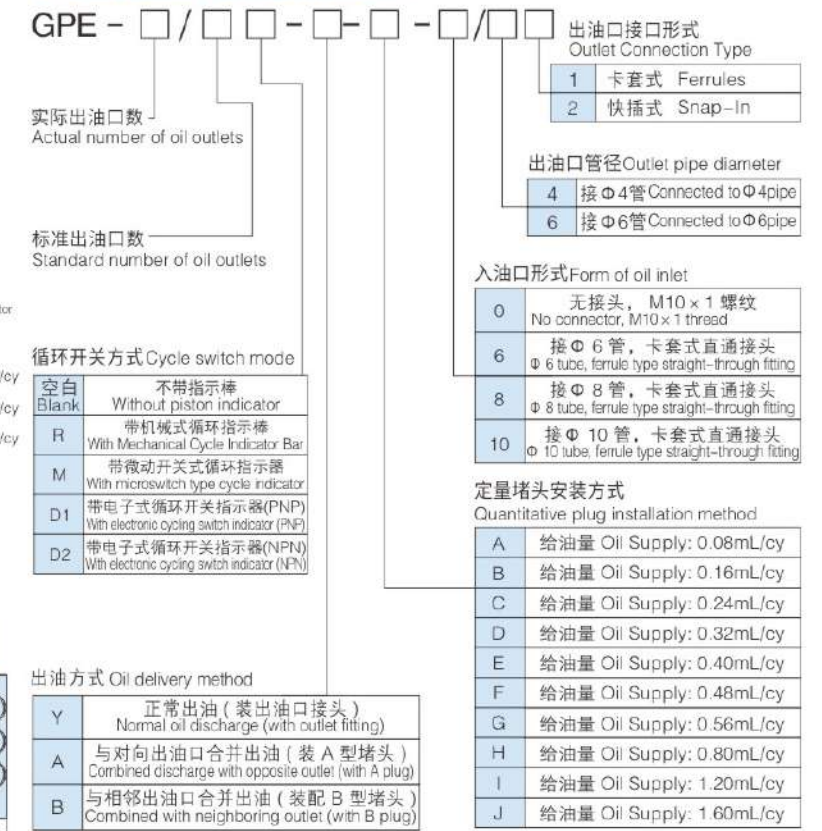
- 最大工作压力: 35MPa
- 最小启动压力: 1.4MPa
- 标准单口排量: 0.08mL/cy ~ 1.6mL/cy
- 工作环境温度: -20°C ~ 70°C
- 适用润滑剂范围(在标准温度下)NLGI 000-2。

概述

整体式递进式分配器GPE可在集中润滑系统中为各润滑点提供计量润滑, 出油口数量为6至20等规格, 工作压力高, 防尘防腐, 适用于恶劣环境的工况, 是工程机械集中润滑的理想产品。单出口排量为0.08mL/cy~1.6mL/cy, 通过A堵头和拆开堵丝可以实现左右合并流量翻倍, 通过B堵头可实现分配流量上下合并。当润滑剂从进油口进入分配器, 分配器就会以递进式的方式连续运行, 并以恒定的排量注油。一旦供给的润滑剂停止流动, 分配器中的所有柱塞也将停止运动。可以通过安装特定的指示器观察一个出油口柱塞的运动, 便可监测整个分配器的运行状况。一旦发生堵塞, 便可实现报警。

出油口数 Number of oil outlets	6	8	10	12	14	16	18	20
L	65	80	95	110	125	140	155	170

订货编制说明 Order description

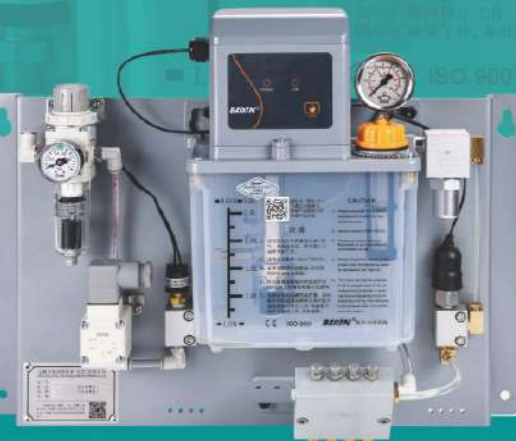


Technical parameter

- Maximum working pressure: 35MPa
- Minimum starting pressure: 1.4MPa
- Standard single-port discharge: 0.08mL/cy ~ 1.6mL/cy
- Working temperature: -20°C ~ 70°C
- Applicable lubricant range (at standard temperature) NLGI 000-2。

Overview

The integral progressive distributor GPE can provide metering lubrication for each lubrication point in the centralized lubrication system, with specifications ranging from 6 to 20 oil outlets. It has high working pressure, dust and corrosion resistance, and is suitable for harsh environmental conditions. It is an ideal product for centralized lubrication of construction machinery. The single outlet displacement is 0.08mL/cy~1.6mL/cy. By using plug A and removing the plug wire, the left and right combined flow rates can be doubled. Using plug B, the distribution of flow rates can be combined up and down. When lubricant enters the distributor from the inlet, the distributor will operate continuously in a progressive manner and inject oil at a constant flow rate. Once the supply of lubricant stops flowing, all Pistons in the distributor will also stop moving. The operation of the entire distributor can be monitored by installing specific indicators to observe the movement of an oil outlet Piston. Once a blockage occurs, an alarm can be triggered.



Oil-air lubrication system MQL lubrication system

油气润滑系统 / 微量油雾润滑系统

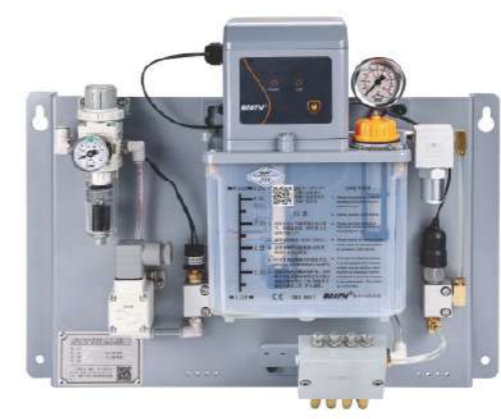
油气润滑系统概述 Oil and Gas Lubrication System Overview

油气润滑系统主要由电动润滑泵、油气混合器、气动处理元件和控制元件等组成。油气润滑系统工作时由润滑泵提供的精准计量的润滑油，在高速气流的推动下在管道内壁形成一种典型的气液两相流体，可以为高速主轴、链条等运动部件提供高效润滑冷却。

The oil and gas lubrication system is mainly composed of an electric lubrication pump; an oil and gas mixer; a pneumatic processing component and a control component. The oil and gas lubrication system is a typical gas-liquid two-phase fluid. Suitable for high speed spindles or other oil and gas lubrication.

ETC 型(Type)

油气润滑系统 Oil-air lubrication system



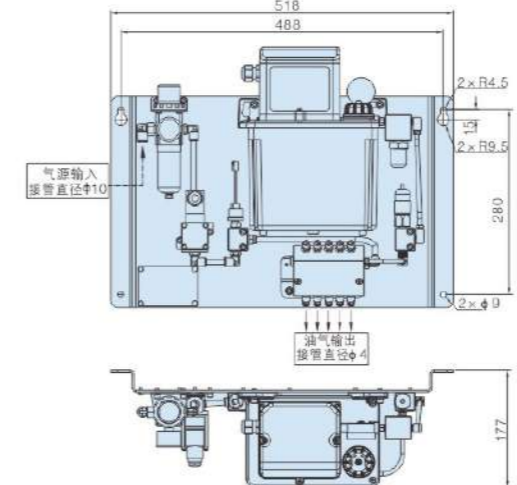
订货编制说明 Order description

ETC - [] - [] - [] - []

控制器类型 Control types		气路电磁阀 Gas Line Solenoid Valve	
A	数显 Digital display ★	空白 blanks	无 not have
C	PLC ★	2	AC 220V
0	不带控制器 Without controller	9	DC24V ★
输入电压 Input voltages		出油量 Oil outlet	
2	AC 220V	1	0.01mL/次 Times ★
9	DC24V ★	2	0.02mL/次 Times ★
油气出口数 Oil and gas Number		3	0.03mL/次 Times
1-6	1-6 个 Each	5	0.05mL/次 Times

注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 微量、连续供油，能够建立稳定的油膜；
- 系统带数显，显示工作状态；
- 设有低油位报警开关，实现低液位报警；
- 系统设有气压压力开关和油压压力开关，可分别监控油气润滑装置中气压过低和油压不足状况；
- 多种出口数可以选择，可以根据润滑点需求，选择不同的系统；
- 可根据实际需要设置系统的间隔时间及供油的频率。

Performance and characteristics

- Micro and continuous oil supply can establish a stable oil film;
- The system has a digital display to show the working status;
- Equipped with low oil level alarm switch to realize low liquid level alarm; The system is equipped with an air pressure switch and an oil pressure switch, which can monitor the air pressure and oil pressure in the oil-air lubrication device respectively;
- A variety of outlets can be selected, and different systems can be selected according to the requirements of the lubrication point;
- The interval time and fuel supply frequency of the system can be set according to actual needs.

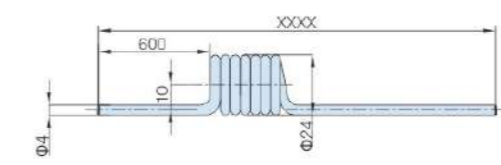
规格型号及技术参数 Specifications, models and technical parameters

型号 Models	项目 Item	油气出口数(个) Number of oil and gas exports(MPa)	出油量 Oil outlet (mL/cy)	气源压力 Air source pressure (MPa)	使用介质粘度 Use medium viscosity (cSt)
ETC		1-6	0.01/0.02/0.03/0.05	0.4-0.8	32-68

螺旋尼龙管 Spiral nylon tube

规格型号及技术参数 Specifications, models and technical parameters

型号 Models	长度 length mm	螺旋圈数 Number of spiral turns	管径规格 (外径X内径) Pipe diameter specification (outer diameter X inner diameter)
TNG-3000-6	3000	6	φ4xφ2
TNG-5000-6	5000	6	φ4xφ2
TNG-10000-6	10000	6	φ4xφ2



TNG-3000-6
规格: φ4xφ2 总长度3米, 螺旋管距离一端0.6米, 螺旋圈数(6圈)。
Specifications: φ4xφ2 The total length is 3 meters, and the distance between the spiral tube and one end is 0.6 meters. The number of spiral coils is 6.
注: 通用标准管长3m、5m、10m
Note: General standard pipe lengths of 3m, 5m, 10m

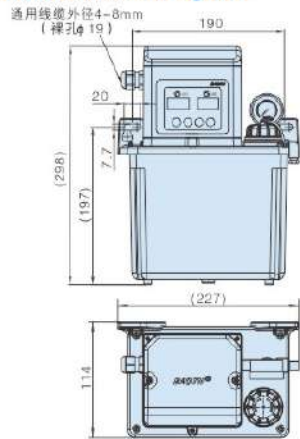
ETC-A2 型(Type)

电动稀油润滑泵 Electric thin oil lubrication pump



注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



Performance and characteristics

- The system can be set to three operating modes.
 - Lubrication: Upon startup, the lubrication time timer is activated first.
 - Interval: After lubrication is complete, the interval time timer is activated (time units can be converted).
 - Memory: After a power outage, the system can resume the previously unfinished intermittent timing upon power restoration.
- Both lubrication time and intermittent timing can be adjusted. (The system includes a lock key function to lock the set lubrication and intermittent timing.)
- It is equipped with a liquid level switch and a pressure switch (optional). When oil level or pressure is insufficient, the buzzer will sound an alarm and output an abnormal signal.
 - Insufficient pressure displays "Erp."
 - Insufficient liquid level displays "Ero."
- System time can be set. "LUB" lubrication time: 1-999 (seconds) "INT" intermittent time: 1-999 (minutes) (customizable for special requirements)
- Panel indicator lights display the lubrication and intermittent status of the lubrication pump.
- The system can use the "RST" key to force lubrication or eliminate abnormal alarm signals.
- In volumetric systems, a pressure relief device is required to be used with the EFA oil-air mixer; refer to pages 89-90.
- Equipped with a relief valve to protect the lubrication pump and piping from damage due to excessive pressure.

规格型号及技术参数 Specifications, models and technical parameters

项目Item 型号规格 Models and specifications	电机Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	吐出量 Throughout (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)	使用介质粘度 Use medium viscosity
	电压 voltage (V)	输出功率 output power (W)											
ETC-A2	DC24	35	1-999		3.0	200	Φ 6	有 Yes	有 Yes	有 Yes	3(树脂 Resin)	4.2	32-68 (cSt)
	AC220	60											

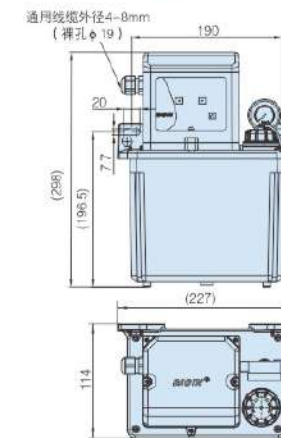
ETC-C2 型(Type)

电动稀油润滑泵 Electric thin oil lubrication pump



注: ★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



Performance and characteristics

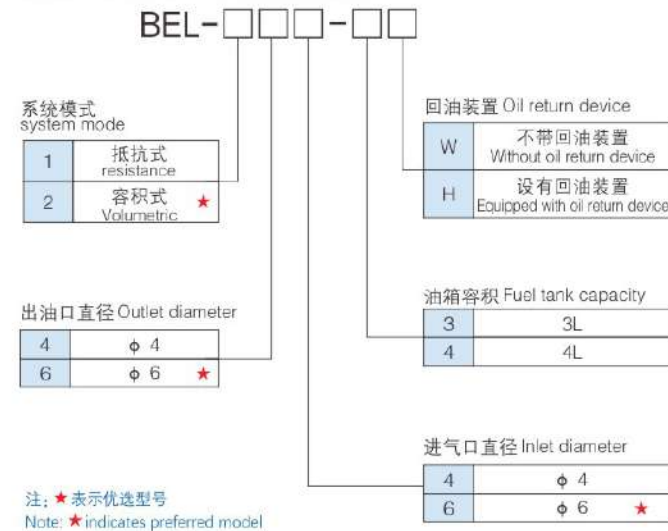
- Equipped with a liquid level switch and a pressure switch (optional). When the oil level or pressure is insufficient, an abnormal signal is output.
- The panel indicator light displays the lubrication and intermittent status of the lubrication pump.
- The system is equipped with a "FEED" button for forced lubrication.
- In a volumetric system, a pressure relief device is required to be used in conjunction with an EFA oil-air mixer. Refer to page 89-90.
- An overflow valve is provided to protect the lubrication pump and piping from damage due to excessive pressure.
- An internal fuse is provided to prevent overcurrent from damaging the IC board and motor.

规格型号及技术参数 Specifications, models and technical parameters

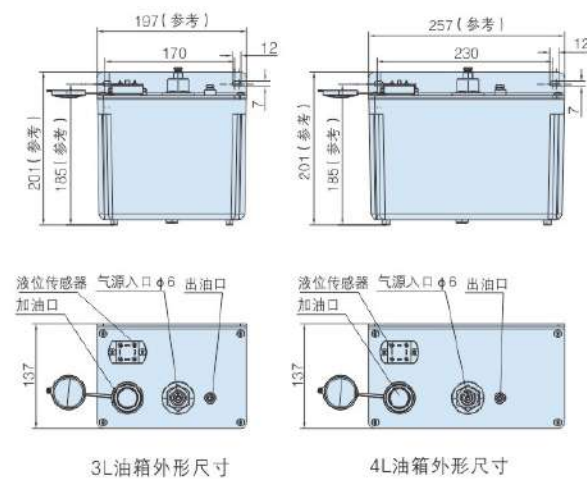
项目Item 型号规格 Models and specifications	电机Motor		润滑时间 lubrication time (s)	间歇时间 Intermittent time (min)	额定压力 Rated pressure (MPa)	吐出量 Throughout (mL/min)	出油管径 Outlet oil pipe diameter (mm)	压力开关 Pressure Switch	液位开关 Liquid level switch	蜂鸣器 Beeper	油箱容量 Oil tank volume (L)	重量 Weight (KG)	使用介质粘度 Use medium viscosity
	电压 voltage (V)	输出功率 output power (W)											
ETC-C2	DC24	35	由外部 PLC 控制 Controlled by an external PLC		3.0	200	Φ 6	有 Yes	有 Yes	无 No	3(树脂 Resin)	4.2	32-68 (cSt)
	AC220	60											



订货编制说明 Order description



产品外形尺寸图 Product dimension figure



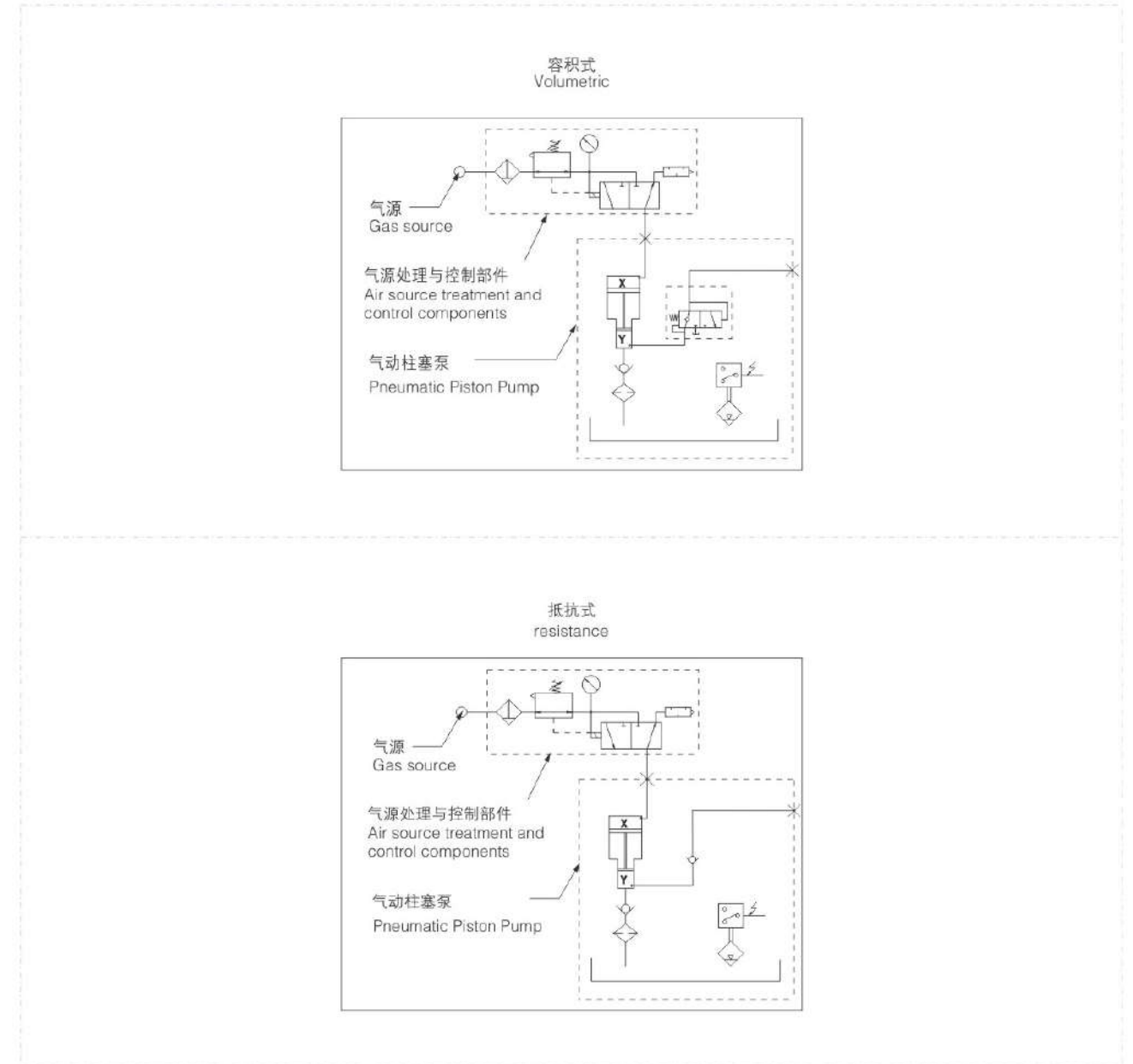
性能与特点

- 采用压缩空气为动力。
 - 由主机PLC或油泵控制器控制电磁阀工作，确定润滑系统供油周期。电磁阀带电控制气动泵工作，电磁阀通电时间 ≥ 1 秒。电磁阀断电气动泵卸压，电磁阀断电时间 ≥ 1 秒。
 - 系统末端设置压力开关，可监测润滑系统主油管路断流与失压。
 - 设有低液位发讯器，可将低液位信号输出。
 - 设有自动卸压装置，润滑泵停止运行，系统自动卸压。
 - 使用油品粘度:ISO VG 20-68。
- 注意: 1. 请使用指定清洁润滑油; 2. 输入在规定的压力范围内的压缩空气。

Performance and characteristics

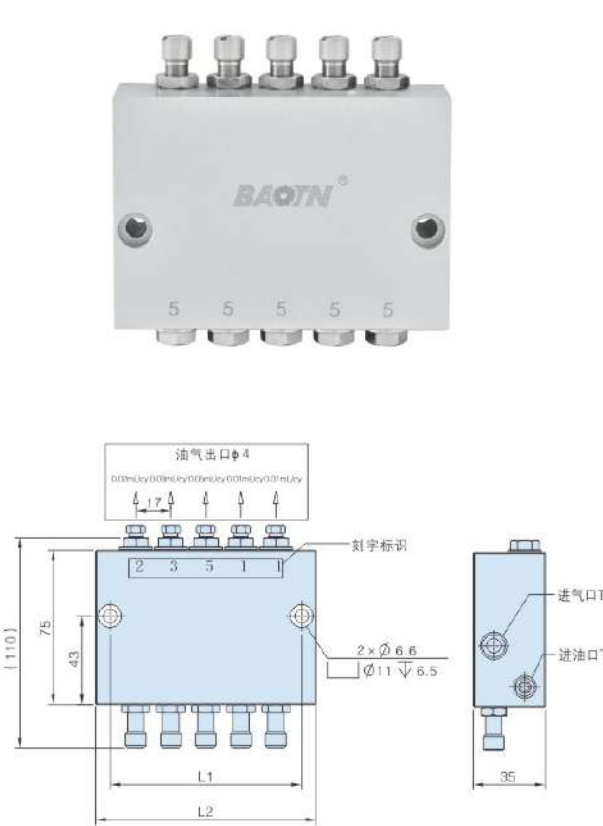
- Powered by compressed air.
 - The solenoid valve is controlled by the host PLC or the oil pump controller to determine the oil supply cycle of the lubrication system. The solenoid valve is electrified to control the pneumatic pump, and the electrification time of the solenoid valve is ≥ 1 seconds. The solenoid valve is de-energized and the pneumatic pump is depressurized, and the solenoid valve is de-energized for ≥ 1 seconds.
 - A pressure switch is set at the end of the system to monitor the interruption and pressure loss of the main oil pipeline of the lubrication system.
 - Equipped with low liquid level transmitter, which can output low liquid level signal.
 - Equipped with an automatic pressure relief device, the lubrication pump stops running, and the system automatically relieves pressure.
 - Use oil viscosity: ISO VG 20-68.
- Note: 1. Please use the specified clean lubrication oil; 2. Input compressed air within the specified pressure range.

工作原理图 Working principle diagram



规格型号及技术参数 Specifications, models and technical parameters

型号 Models	项目 Item	增压比 boost ratio	公称排量mL/cy Nominal displacement	输入气压MPa input air pressure	回油 oil return	油箱容积 L Fuel tank capacity	低液位发讯器 Low level transmitter
BEL-□□□-3W		1.8	5	0.2-0.6	无 NO	3	下通电最大通电流1.5A The maximum power-on current is 1.5A under power-on
BEL-□□□-4W						4	
BEL-□□□-3H					有 YES	3	
BEL-□□□-4H						4	



订货编制说明 Order description

EFA - □ - □

出油量 Oil outlet	
1	0.01 毫升 / 次 0.01mL/time ★
2	0.02 毫升 / 次 0.02mL/time ★
3	0.03 毫升 / 次 0.03mL/time ★
5	0.05 毫升 / 次 0.05mL/time

出油口数量 Quantity of oil outlets	
01-08	1-8 个

注：★表示优选型号
Note: ★ indicates preferred model

油量表示方法

(注：当所有出油口油量一样只用一个油量表示)

例1：EFA-05-2表示EFA型5口分配器，第1、2、3、4、5出油口油量全部为0.02毫升/次。

例2：EFA-05-53235表示EFA型5口分配器，第1、2、3、4、5出油口油量分别为0.05、0.03、0.02、0.03、0.05毫升/次。

注意事项：

- 根据实际需要控制油气混合器的工作次数；
- 请正确连接管路，确保管路没有泄露；
- 管路连接后请先使油气混合器连续工作数次，至出油口管路有油排出；
- 刻字标识“3”表示该出油口出油量为0.03mL/cy，刻字标识“2”表示该出油口出油量为0.02mL/cy。

油路、气路输入要求

Oil and gas input requirements

输入部分 input section	适用压力 Applicable pressure	输入介质过滤精度 Input media filter precision
油路 oil road	2.0-3.0MPa	3 μm
气路 Gas line	0.4-0.8MPa	5 μm

Oil quantity indication method

(Note: When the oil volume of all oil outlets is the same, only one oil volume is used to indicate)

Example 1: EFA-05-2 means EFA type 5-port distributor, the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlets is all 0.02mL/time.

Example 2: EFA-05-53235 means EFA type 5-port distributor, the oil volume of the 1st, 2nd, 3rd, 4th and 5th oil outlet is 0.05, 0.03, 0.02, 0.03, 0.05 mL/time respectively.

Precautions:

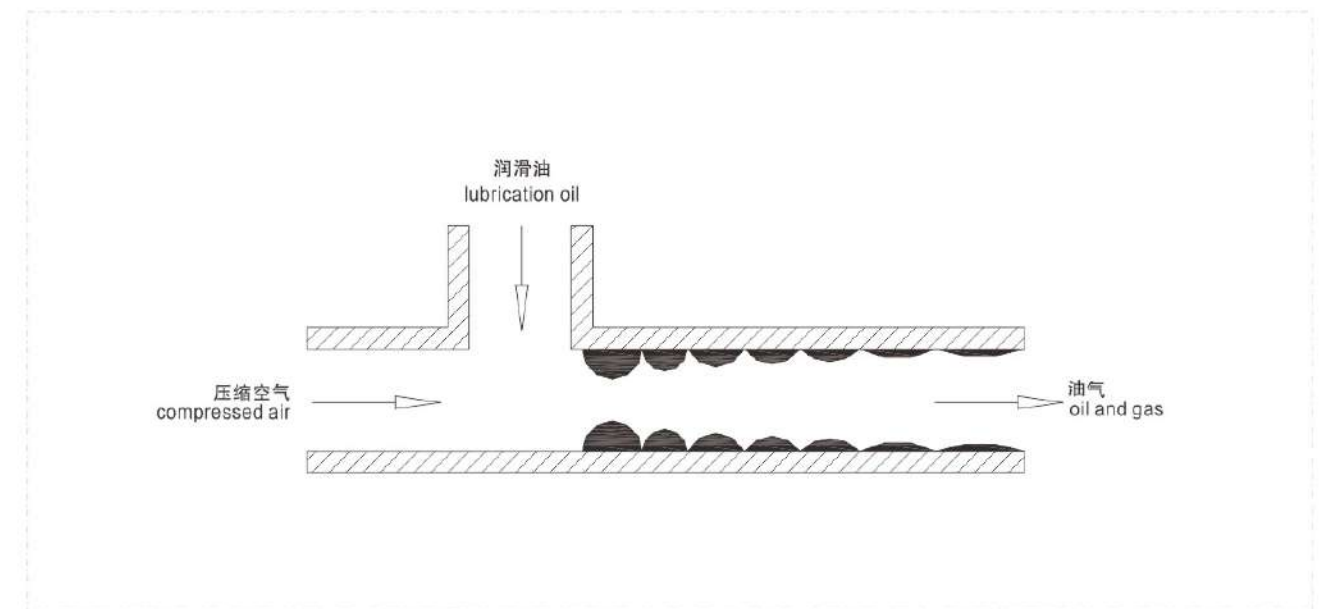
- Control the working times of the oil and gas mixer according to actual needs;
- Please connect the pipeline correctly to ensure that the pipeline does not leak;
- After the pipeline is connected, please make the oil-gas mixer work continuously for several times until the oil is discharged from the oil outlet pipeline;
- The lettering mark "3" indicates that the oil output of the oil outlet is 0.03mL/cy, The lettering mark "2" indicates that the oil output of the oil outlet is 0.02mL/cy.

油气润滑基本原理

润滑油经过分配器定量排出，在压缩空气的作用下，粘附在管壁四周形成不均匀油膜，并缓慢向前移动，在行将到达管道出口时，油膜变得越来越薄且均匀，最后以极其精细的连续油滴喷射到润滑点。(如下示意图)

Basic principles of oil-air lubrication

The lubrication oil is quantitatively discharged through the distributor. Under the action of compressed air, it adheres to the pipe wall to form an uneven oil film and moves forward slowly. When it is about to reach the pipe outlet, the oil film becomes thinner and more uniform. It is sprayed onto the lubrication point in extremely fine continuous oil droplets. (as shown in the diagram below)



规格型号及技术参数

Specifications, models and technical parameters

规格型号 Specifications	L1 ± 0.2	L2 ± 0.2	进油口螺纹 T1 Air inlet thread	进气口螺纹 T2 Air intake thread	出油口管径 Outlet diameter	出油量 Oil outlet (mL/cy)
EFA-01	25	39	M10X1.0	PT1/4	φ 4	0.01/0.02/0.03/0.05
EFA-02	42	56				
EFA-03	59	73				
EFA-04	76	90				
EFA-05	93	107				
EFA-06	110	124				
EFA-07	127	141				
EFA-08	144	158				



订货编制说明 Order description

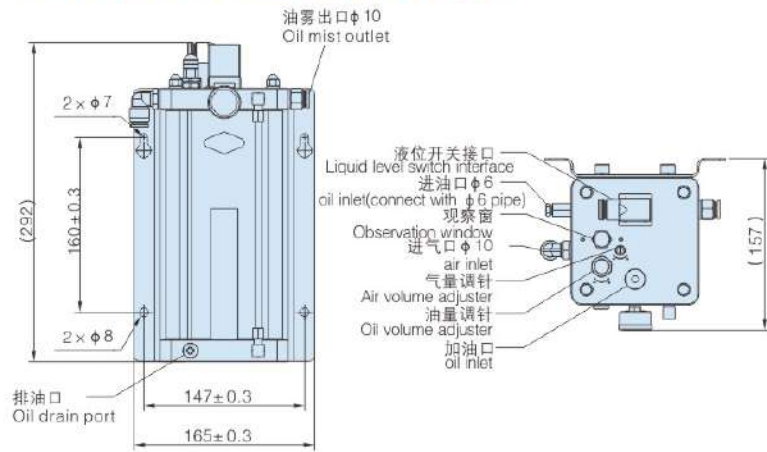
EVN-□□□

有效容积 Effective volume	10	1L
油雾输出管径 Oil mist output pipe diameter	08	Φ 8
	10	Φ 10
油雾出口数 Number of oil mist outlets	1-3	1-3个

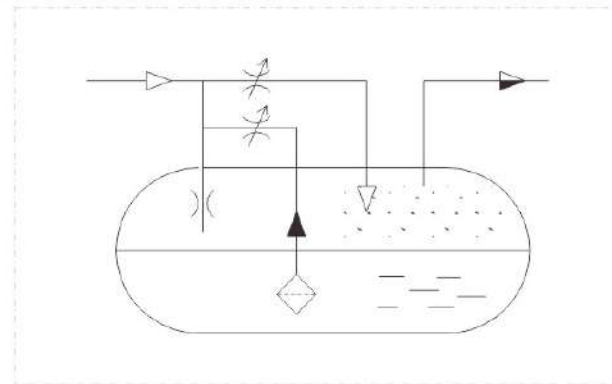
技术参数 technical parameters

型号 Model	EVN
有效容积 Effective volume	1L
进气压力 Inlet Pressure	0.3-0.8MPa
进气管径 Inlet pipe diameter	Φ 10
进油管径 Oil inlet pipe diameter	Φ 6
油雾出口管径 Oil mist outlet pipe diameter	Φ 8、Φ 10
油雾出口数 Number of oil mist outlets	1~3个
使用介质 Applicable medium	润滑油(10-32cSt) Oil (10-32cSt)
最大用油量 Maximum oil consumption	20mL/min
整机净重 Net weight	3.5kg
使用温度 Operating temperature	10℃-60℃

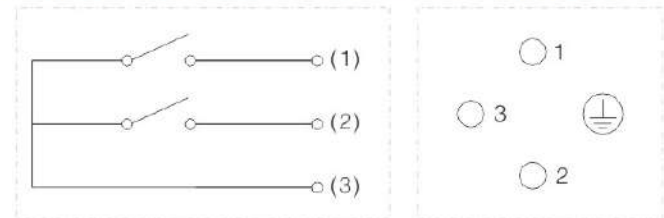
产品外形尺寸图 Product dimension figure



工作原理图 Working principle diagram



液位开关电路图 Level Switch Circuit Diagram



注：低液位报警接线:1、3；高液位报警接线:2、3；
低液位报警时1、3接通，报警解除时1、3断开；
高液位报警时2、3接通，报警解除时2、3断开。

Note: Low level alarm wiring:1,3; High level alarm wiring:2,3.
1 and 3 turn on when the low level alarm is activated and turn off when the alarm is deactivated.
2 and 3 turn on when the high level alarm is activated and turn off when the alarm is deactivated.

适用介质 Applicable medium	润滑油 lubrication oil	输入气压 Input air pressure	0.3-0.8MPa
注意事项 caveat	1、使用时请勿超出最大使用压力(最大使用压力 1MPa)； 2、使用润滑油粘度 10-32cst； 3、请使用干净的全新润滑油，不可使用回收的润滑油 1. Do not exceed the maximum use pressure when using(Maximum operating pressure 1MPa); 2. Use lubricant viscosity 10-32cst; 3. Please use clean and brand new lubricant, do not use recycled lubricant.		



订货编制说明 Order description

EVO-□□□□

进气管径 intake pipe diameter	08	Φ 8
油雾出口管径 Oil mist outlet pipe diameter	10	Φ 10
	12	Φ 12

气路电磁阀 Gas Line Solenoid Valve

2	AC 220V	标准款 ★
9	DC24V	Standard model
空白 Blank	无电磁阀, 减压阀 No solenoid valve, pressure reducing valve	简易款 Simple model

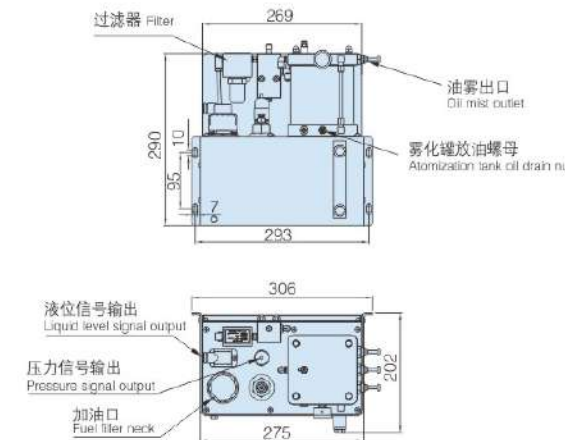
注：标准款(带电磁阀, 减压阀)
Note: Standard model (with solenoid valve and pressure reducing valve)

出口压力表 Export pressure gauge

1	PNP 数字压力开关 PNP Digital Pressure Switch	★
2	NPN 数字压力开关 NPN Digital Pressure Switch	
空白 Blank	机械式压力表 Mechanical pressure gauge	

注：★表示优选型号
Note: ★ indicates preferred model

产品外形尺寸图 Product dimension figure



性能与特点

- 采用压缩空气为动力。
- 由主机PLC控制电磁阀工作，确定气动泵润滑频率，电磁阀通电时间≥5秒，电磁阀断电气动泵卸压，电磁阀断电时间≥5秒。
- 系统设有油路压力开关，可监控润滑系统油路断流与失压。
- 系统设有低液位发讯，可将低液位信号输出。
- 可选配油雾出口压力监控。
- 使用油品：20-68#汽轮机油。

Performance and characteristics

- Powered by compressed air.
- The main unit PLC controls the operation of the solenoid valve to determine the lubrication frequency of the pneumatic pump. The solenoid valve remains energized for ≥5 seconds, and when the solenoid valve is de-energized, the pneumatic pump is depressurized. The solenoid valve remains de-energized for ≥5 seconds.
- The system is equipped with an oil circuit pressure switch to monitor oil circuit flow interruption and pressure loss in the lubrication system.
- The system is equipped with a low-level alarm to output a low-level signal.
- Optional oil mist outlet pressure monitoring is available.
- Recommended lubricant: 20-68# turbine oil.

技术参数 technical parameters

型号 Model	油箱容积 Fuel tank volume	进气压力 Air input Pressure	油雾出口压力 Oil mist outlet pressure	进气管径 Inlet pipe diameter	油雾出口管径 Oil mist outlet pipe diameter	油路压力检测开关 Oil circuit pressure detection switch	低液位发讯器 Low liquid level alarm	使用介质 Medium used	整机净重 Net weight	使用温度 Operating temperature
EVO	4L	0.6-0.8MPa	0.075-0.3 MPa	Φ 8	Φ 10、Φ 12	常开, 闭合压力2MPa Normally open, closing pressure 2MPa	下通电 Normal Open	20-68# 汽轮机油 20-68# turbine oil	8KG	5℃-40℃

微量油雾润滑泵 MQL lubrication unit



EVB-A

注: ★表示优选型号
Note: ★ indicates preferred model



EVB-C



EVB-0

订货编制说明 Order description

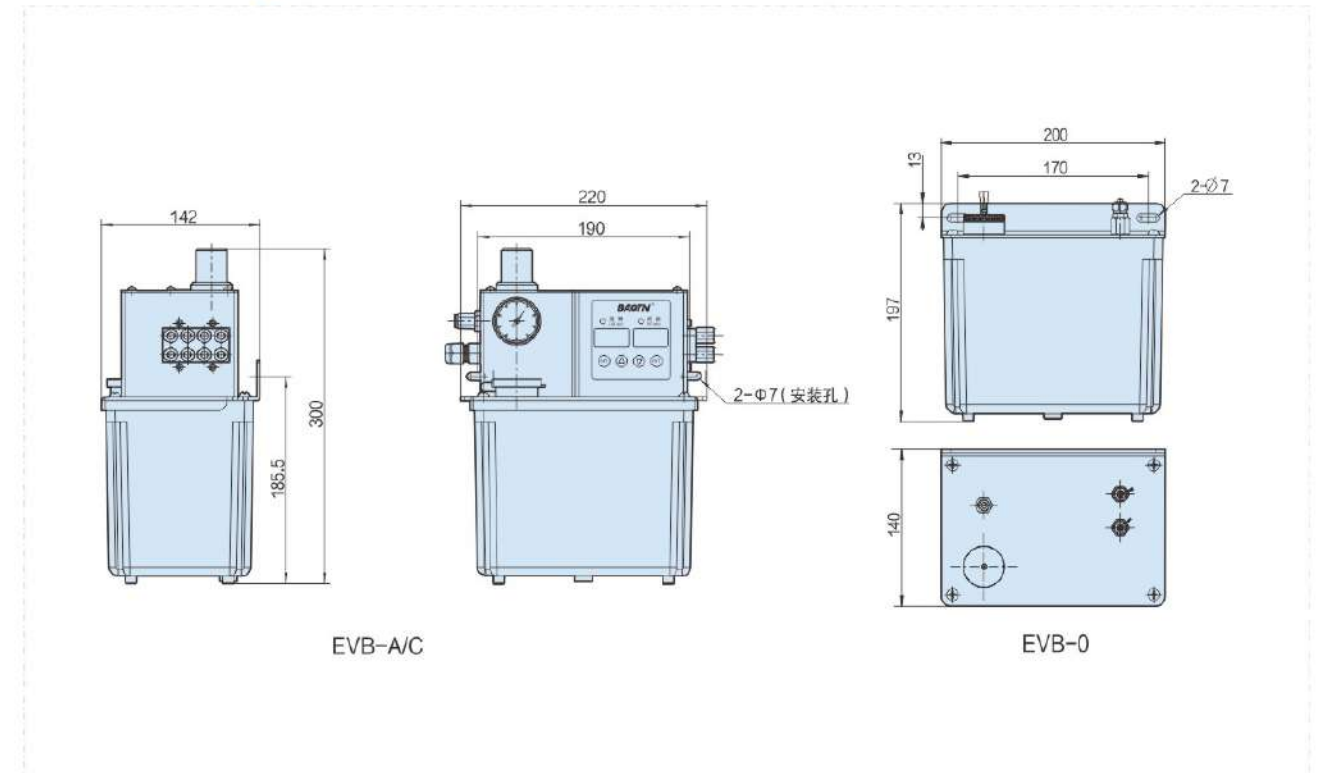
EVB-□□□□□□□□□□		止逆阀 Check valve
控制器类型 Control types		Z 带止逆阀 With check valve
A 数显 Digital display ★		空白 不带止逆阀 Without check valve
C PLC ★		液位开关 Liquid level switch
O 无控制器 No controller		D 上通电 Upper power supply
EVA 喷雾器个数 EVA Number sprayer		空白 下通电 Lower power supply
1 1个 Each		W 无液位开关 Liquid level switch unavailable
2 2个 Each ★		配管长度 Piping length
3 3个 Each		2 2 m
4 4个 Each		3 3 m
油箱容积 Oil tank volume		4 4 m
3 3L ★		5 5 m
注: 喷雾器默认型号EVA-2240-66B-ST Note: The default model of the sprayer EVA-2240-66B-ST		注: 长度可定制 Note: The length can be customized
止逆型最多 2 个数 The number of inverse types is up to 2		输入电压 input voltages
性能与特点		1 单相 110V Single phase 110V
		2 单相 220V Single phase 220V ★
		9 DC24V ★

- 系统设有调压阀和电磁阀，对气源进行精确控制，与润滑油充分混合雾化，减少机械刀具之损耗，冷却润滑效果更佳。
- A.数显控制：冷却润滑时间和间歇时间均可调整。（内设有锁键功能，可锁定设置后的润滑和间歇时间）系统时间可设定，“LUB”润滑时间：1-999（秒），“INT”间歇时间：1-999（秒）（特殊要求可定制）
- B.PLC控制：冷却润滑时间和间歇时间由外部PLC控制。
- C.无控制：冷却润滑时间和间歇时间无需控制。
- 设有液位开关、当冷却润滑油不足时蜂鸣器会发出报警、并将异常信号输出。（数显控制液位不足显示Ero）
- 面板指示灯可显示出润滑和间歇状态。
- 系统建议使用气源压力0.4-0.6MPa。
- 默认液体和气体管直径为Φ6
- 配合(EVA型)自吸式冷却润滑喷雾器使用。

Performance and characteristics:

- The system is configured with pressure adjustment valve and electromagnetic valve to control gas source accurately, and full atomization is realized with the lubricant, aiming to reduce losses of knife tools and better cooling lubrication effects.
- A.Control with digital display: cooling lubrication time and intermittent time are adjustable. (The function of lock key is provided, and lock lubrication and intermittent time after setting)
The system time can be set, "LUB" lubrication time: 1-999 seconds
"INT" intermittent time: 1-999 seconds (Customized for special needs)
- B.PLC control: cooling and lubrication time and intermittent time are controlled by external PLC.
- C.No control: cooling and lubrication time and intermittent time are controlled by No control.
- Liquid level switch is provided. When the cooling liquid level is insufficient, the beeper is sounded and transmit abnormal signal. (Ero is displayed if the liquid level is insufficient in digital display).
- The panel indicator lamp displays lubrication and intermittent status.
- Air source pressure 0.4-0.6MPa is recommended.
- The default liquid and gas pipe diameter is Φ6
- Self-suction cooling and lubrication sprayer shall be used together with model EVA.

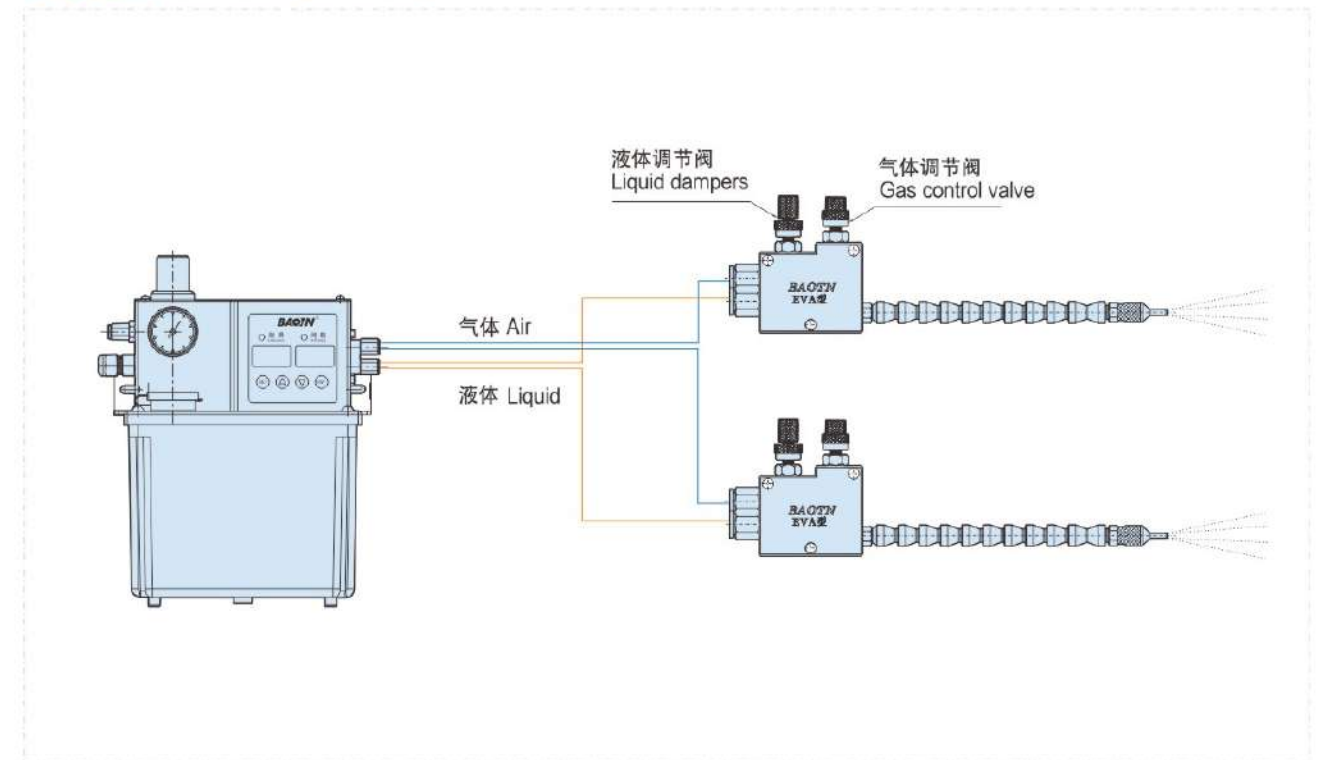
产品外形尺寸图 Product dimension figure



EVB-A/C

EVB-0

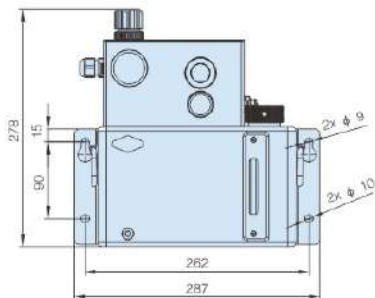
使用示意图 Schematic diagram of usage



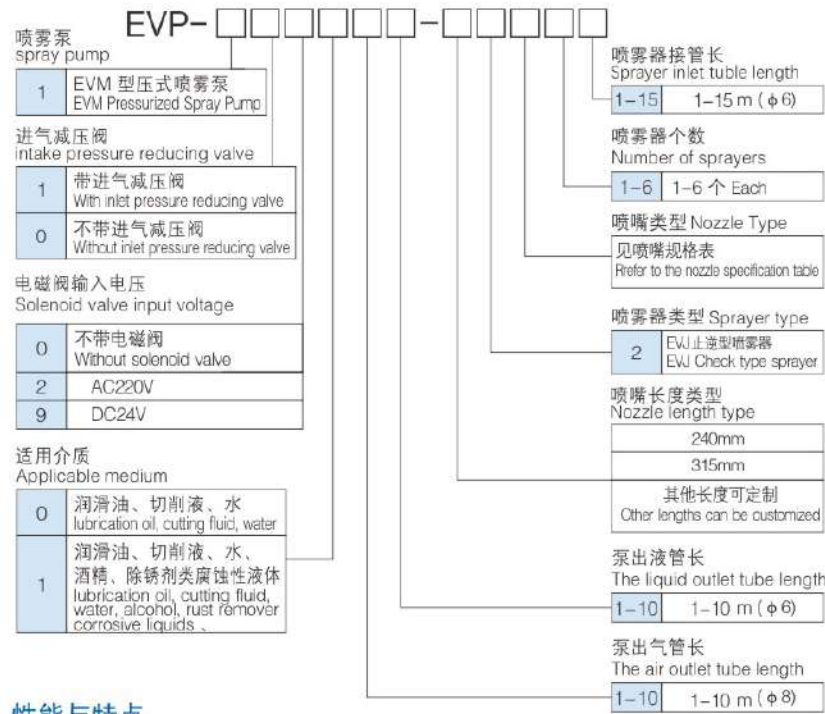


注：介质选用1时泵油箱为方形，详细安装规格见图一；
选用0时泵油箱为圆筒型，详细安装规格见图二。
Note: The pump tank is square when media selection 1,
detailed installation specifications see Figure 1.
When selecting 0, the pump tank is cylindrical, detailed
installation specifications see Figure 2.

产品外形尺寸图 Product dimension figure



订货编制说明 Order description



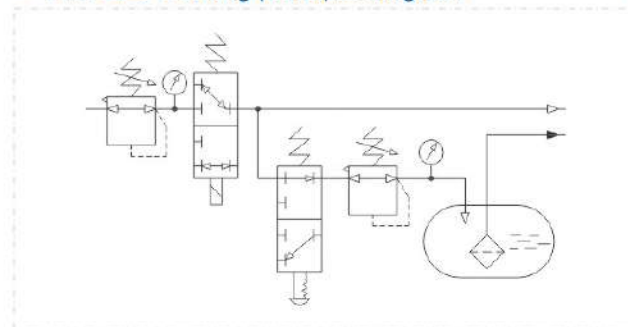
性能与特点

- 系统设有调压阀和电磁阀，对气源进行精确控制，使气体与液体充分雾化后高速喷出；
 - 设有液位开关，当剩余液体不足时，液位开关信号变为闭合信号；
 - 系统建议使用气源压力0.4-0.8MPa；
 - 配合喷嘴样式1时，罐内压力默认为0.25MPa，适用其余喷嘴类型时，罐内压力与进气压力相同。
- 适用场景：刀具润滑冷却，锯片润滑冷却，以及酒精、消毒液、除锈剂等喷雾场合；

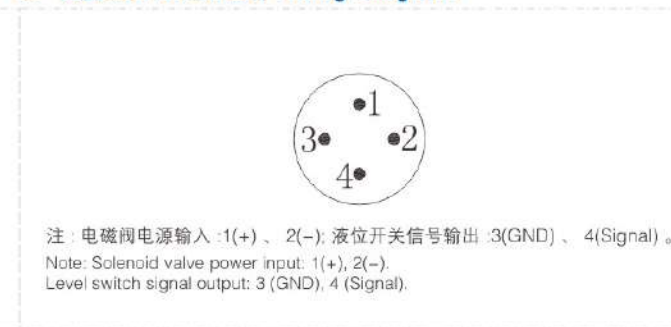
Performance and characteristics

- The system is equipped with pressure regulating valve and solenoid valve to control the air source accurately, so that the air and liquid are fully atomized and then sprayed out at high speed.
- There is a liquid level switch, when the remaining liquid is not enough, the liquid level switch signal becomes closed signal.
- The system is recommended to use the air source pressure 0.4-0.8MPa.
- When equipping with nozzle style 1, the pressure inside the tank is 0.25MPa by default, when applying to other nozzle types, the pressure inside the tank is the same as the inlet pressure.
- Applicable scenes: tool lubrication and cooling, saw blade lubrication and cooling, as well as alcohol, disinfectant, rust remover and other spraying occasions.

工作原理图 Working principle diagram

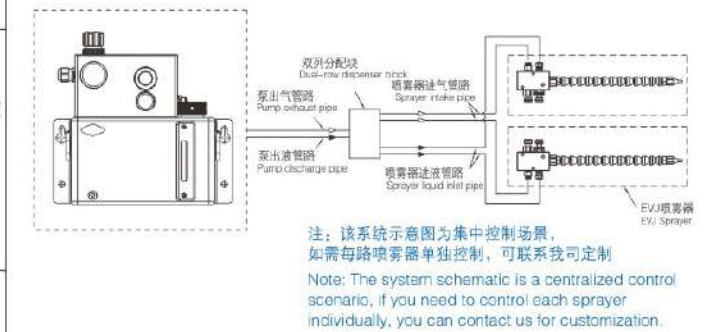


电气接线图 Electrical Wiring Diagram



编号 No.	喷嘴样式 Nozzle Style	适用范围 Scope of application
1		常规形式，适用于大多数环境； 适用介质：酒精、润滑油、切削液 Conventional form, suitable for most environments; applicable media: alcohol, lubrication oil, cutting fluid
2		适用于锯片润滑； 适用介质：润滑油、切削液 Suitable for saw blade lubrication; applicable media: lubrication oil, cutting fluid
3		适用于锯片润滑； 适用介质：润滑油、切削液 Suitable for saw blade lubrication; applicable media: lubrication oil, cutting fluid

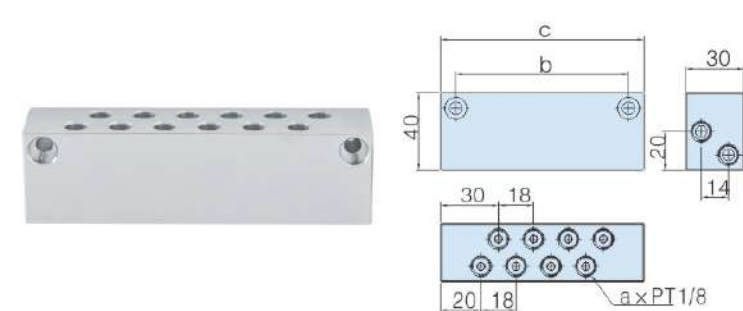
EVP 系统示意图 Schematic diagram of EVP system



适用介质 Applicable medium	润滑油、切削液(可选酒精、除锈剂) lubrication oil, cutting fluid (optional alcohol, rust remover)
输入气压 Input air pressure	0.4-0.8MPa
注意事项 Caution	<ol style="list-style-type: none"> 1、使用时请勿超出最大使用压力； 2、请使用推荐的溶液，使用其他溶液可能使泵损坏； 3、补充溶液时，请将排气阀按钮按下，溶液补充完毕后，确保加液口盖旋紧，再将排气阀按钮复位； <ol style="list-style-type: none"> 1、Please do not exceed the maximum operating pressure when using. 2、Please use the recommended solution, using other solutions may damage the pump. 3、When replenishing the solution, please press the exhaust valve button, after the solution is replenished, make sure the cap of the filling port is tightly screwed, and then reset the exhaust valve button.

技术参数 technical parameters

型号 Model	油箱容积 Fuel tank volume	进气压力 Air input Pressure	内部压力 Internal Pressure	进气管径 Inlet pipe diameter	输入电压 Input Voltage	出气管径 Outlet pipe diameter	出液管径 Discharge tube diameter	使用介质 Medium used	最大排量 Maximum Discharge Capacity	整机净重 Net weight
EVP	4L	0.4-0.8MPa	0-0.25MPa	φ8mm	AC220V 或DC24V	φ8mm	φ6mm	润滑油、切削液(可选酒精、除锈剂)	1.5L/min	8.2kg

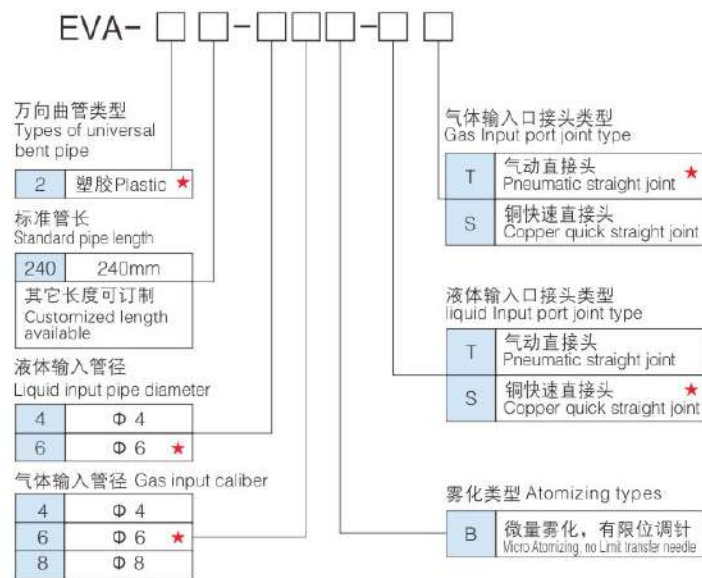


技术参数 technical parameters

型号 Model	a	b	c
ESA02	4	53	69
ESA03	6	71	87
ESA04	8	89	105
ESA05	10	107	123
ESA06	12	125	141
ESA07	14	143	159
ESA08	16	161	177

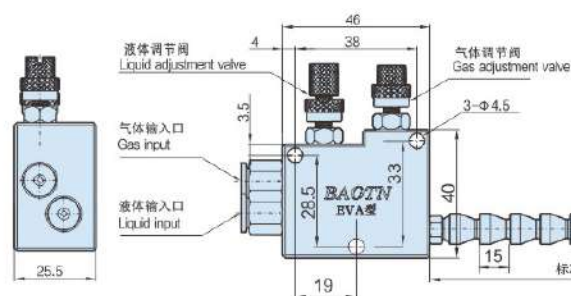
微量油雾喷雾器 Spraying lubrication system

订货编制说明 Order description



注: *表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



EVA 耗油量测试结果 Testing results of EVA oil consumption

液体品类 Liquid variety	流量范围 Flow range (mL/min)	气体压力 Gas pressure (0.4-0.7MPa)
水, 酒精 Water, alcohol	0-30	
10号高速主轴油 No.10 high-speed main shaft oil	0-25	

性能与特点:

此产品应用真空自呼吸之原理, 使液体经由喷嘴和空气混合雾化, 喷射至加工件、刀具或轴承等润滑点。冷却效果佳, 并提供润滑、除屑、清洁等功能, 以提升生产效率及加工品质, 减少机械刀具之损耗。

- 在加工过程中冷却, 润滑, 吹除屑可一次完成。
- 可提高加工速度, 节省加工时间及费用并减少刀具磨损。
- 有助于加工品质的确保及刀具最佳使用效果。
- 加工合金或超硬材质, 亦可达到平滑, 高精度之表面。
- 可针对不同的固定方式, 选择不同配件搭配使用。

注意事项:

- 需要使用推荐的清洁溶剂。
- 请勿使用腐蚀性之液体。
- 进气压力范围0.4-0.7MPa(雾化效果与气量, 气压有关联)
- 适用液体黏度: 0-32cSt.

使用场合:

- 车床, 钻床, 铣床, 磨床, 攻牙机, 刀具研磨机, CNC机床, 冲床, 锯床, 木工机械, 送料机等。

Performance and characteristics:

The product shall be operated with the principle of vacuum self-suction, and the liquid is atomized via the nozzle and air until spraying onto working pieces, tools or bearings and other lubrication points. The cooling effects are excellent, and lubrication is provided; as well as scrap removal, cleaning and other functions are used to increase production efficiency and improve processing quality and reduce losses of machinery tools.

- Cool down in processing, lubricate, and remove iron scrap in one time.
- Increase processing rate, save processing time and costs, and reduce wear of knife tools.
- Beneficial for assuring processing quality and application effects of knife tools.
- Processing alloy or super-hard materials achieves smooth and high-precision surface.
- Different fixing modes are used to match different parts.

Attentions:

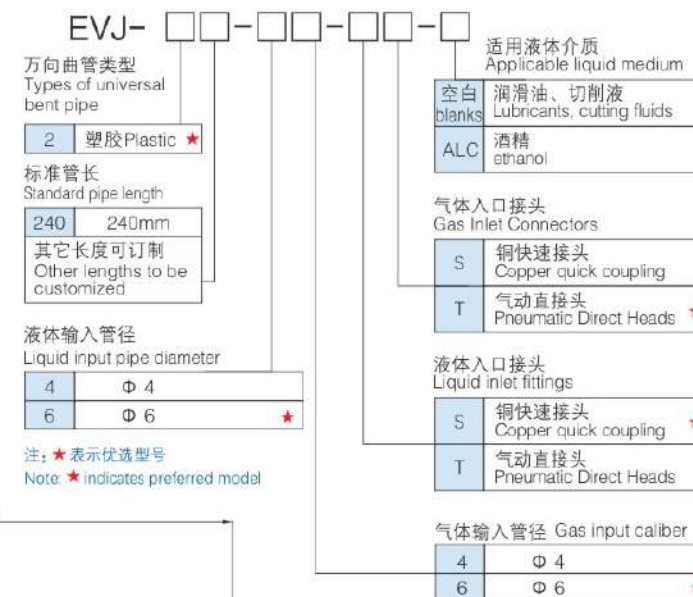
- Recommended cleaning solvents are required.
- Corrosive liquid cannot be used.
- Inlet pressure range 0.4-0.7MPa (atomization effects related to air volume and air pressure)
- Applicable liquid viscosity: 0-32 cSt.

Situations for application:

- Lathe, drill, mill, grinder, tapping machine, knife tool grinding machine, CNC lathe, punch, sawing machine, woodworker machinery and feeding machine etc.

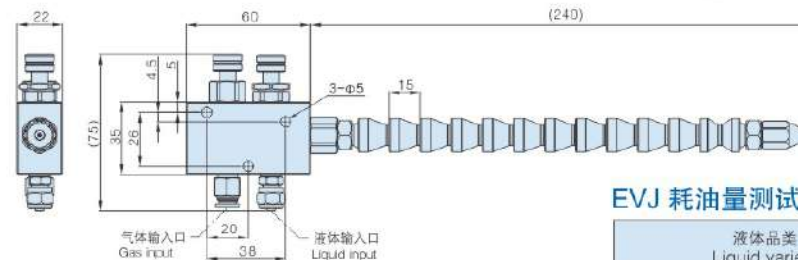
止逆型喷雾器 Check type sprayer

订货编制说明 Order description



注: *表示优选型号
Note: * indicates preferred model

产品外形尺寸图 Product dimension figure



EVJ 耗油量测试结果 Testing results of EVJ oil consumption

液体品类 Liquid variety	流量范围 Flow range (mL/min)	气体压力 Gas pressure (0.4-0.7MPa)
水, 酒精 Water, alcohol	0-30	
10号高速主轴油 No.10 high-speed main shaft oil	0-25	

性能与特点:

此产品采用真空自呼吸原理, 液体经油箱被吸入到喷嘴口处, 并在高速气流带动下雾化, 喷射至加工件, 刀具或轴承等润滑点。可起到良好的润滑和冷却效果, 同时具备除屑, 清洁等功能, 可有效减少刀具磨损, 延长刀具使用寿命, 并提升加工工件品质, 提升加工效果。

- 在加工过程中冷却, 润滑, 吹除屑可一次完成。
- 可提高加工速度, 减少刀具磨损, 节省加工时间和费用。
- 有助于提升工件加工品质及刀具最佳使用效果。
- 加工合金和好硬材质, 也可以达到光滑, 高精度的表面。
- 密封可靠, 避免液体泄漏, 延长使用寿命。
- 固定方式灵活选择, 可搭配不同配件使用。
- 气路与油路启停联动, 由气路控制油路。

注意事项:

- 需要使用清洁液体。
- 请勿使用腐蚀性液体。
- 气压源气压范围0.4-0.7MPa(雾化效果与气量, 气压有关联)
- 适用液体黏度: 0-32cSt.

使用场合:

- 车床, 钻床, 铣床, 磨床, 攻牙机, 刀具研磨机, CNC机床, 冲床, 锯床, 木工机械, 送料机等。

Performance and characteristics:

The product shall be operated with the principle of vacuum self-suction, and the liquid is atomized via the nozzle and air until spraying onto working pieces, tools or bearings and other lubrication points. The cooling effects are excellent, and lubrication is provided; as well as scrap removal, cleaning and other functions are used to increase production efficiency and improve processing quality and reduce losses of machinery tools.

- Cool down in processing, lubricate, and remove iron scrap in one time.
- Increase processing rate, save processing time and costs, and reduce wear of knife tools.
- Beneficial for assuring processing quality and application effects of knife tools.
- Processing alloy or super-hard materials achieves smooth and high-precision surface.
- Pressurization is enhanced to avoid internal leakage and prolong service life.
- Different fixing modes are used to match different parts.
- The air circuit and the oil circuit are opened or closed in linkage, and the oil circuit is controlled by the air circuit.

Attentions:

- Clean liquid shall be used.
- Corrosive liquid cannot be used.
- Scope of gas pressure of the gas pressure source 0.4-0.7MPa (atomization effects related to air volume and air pressure)
- Applicable liquid viscosity: 0-32cSt.

Situations for application:

- Lathe, drill, mill, grinder, tapping machine, knife tool grinding machine, CNC lathe, punch, sawing machine, woodworker machinery and feeding machine etc.



订货编制说明 Order description

油雾出口 Oil mist outlet		增压泵 booster pump	
01	1 个油雾出口 1 oil mist outlet	0	不带增压泵 Without booster pump
02	2 个油雾出口 2 oil mist outlet	01	带增压泵 With booster pump
电磁球阀 Electromagnetic ball valve			
0	不带电磁球阀 Without electromagnetic ball valve		
01	带 1 个电磁球阀 With 1 electromagnetic ball valve		
02	带 2 个电磁球阀 With 2 electromagnetic ball valve		

注：电磁球阀输入电源为 DC24V
Note: The input power supply for the electromagnetic ball valve is DC24V.

- 注：
- 油雾管径 $\phi 12$ ，气源管径 $\phi 12$ 。
 - 刀具直径 $< 6\text{mm}$ 时，必须配增压泵
刀具直径 $\geq 6\text{mm}$ 时，可不选配增压泵，也可配增压泵油雾效果更佳。
 - 增压泵参数：增压比 1:2，最大增压 1.6MPa。

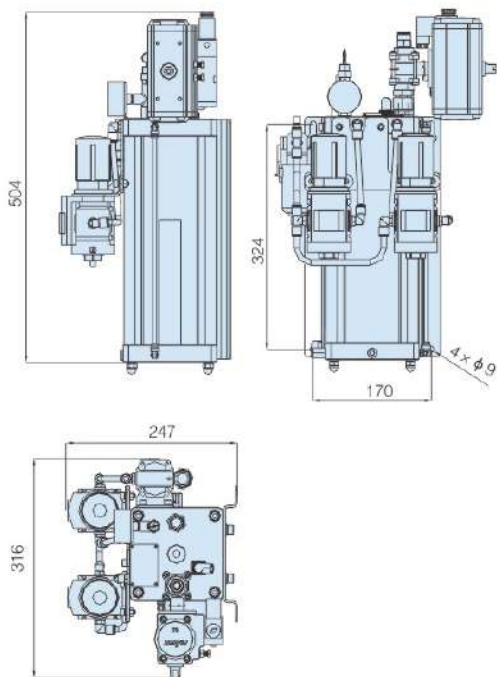
Note:

- Oil mist pipe diameter $\phi 12$, air source pipe diameter $\phi 12$.
- When the tool diameter is $< 6\text{ mm}$, a booster pump must be used.
When the tool diameter is $\geq 6\text{ mm}$, a booster pump is optional, but using one will improve the oil mist effect.
- Booster pump parameters: pressure ratio 1:2, maximum pressure 1.6 MPa.

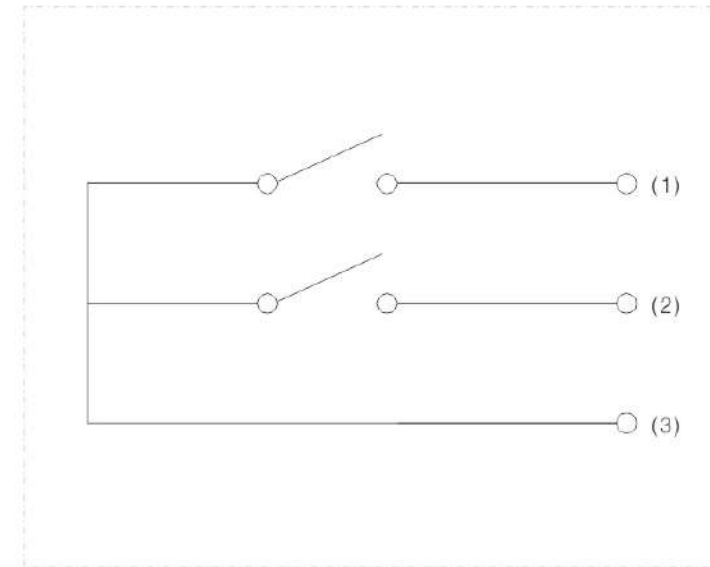
技术参数 technical parameters

油箱容积 Tank volume	2.5L
最大使用压力 Maximum working pressure	1.6MPa
气源管径 Gas supply pipe diameter	$\phi 12\text{mm}$
喷雾管径 Spray Pipe Diameter	$\phi 12\text{mm}$
油雾颗粒 Oil mist particles	3-50 μm
压缩气体消耗量 Compressed gas consumption	10-270NL/h
润滑介质消耗量 Lubricant consumption	1-50ml/h
使用介质 Applicable medium	微量润滑油
润滑点数 Lubrication points	1/2
整机净重 Net weight of the whole machine	9kg

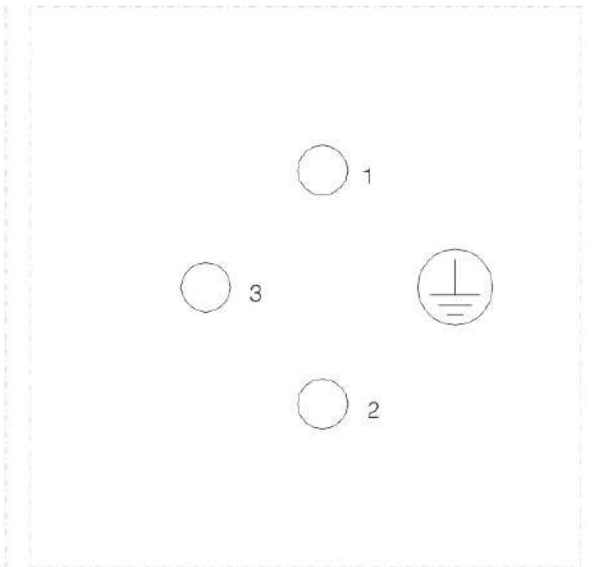
产品外形尺寸图 Product dimension figure



液位开关电路图 Level Switch Circuit Diagram



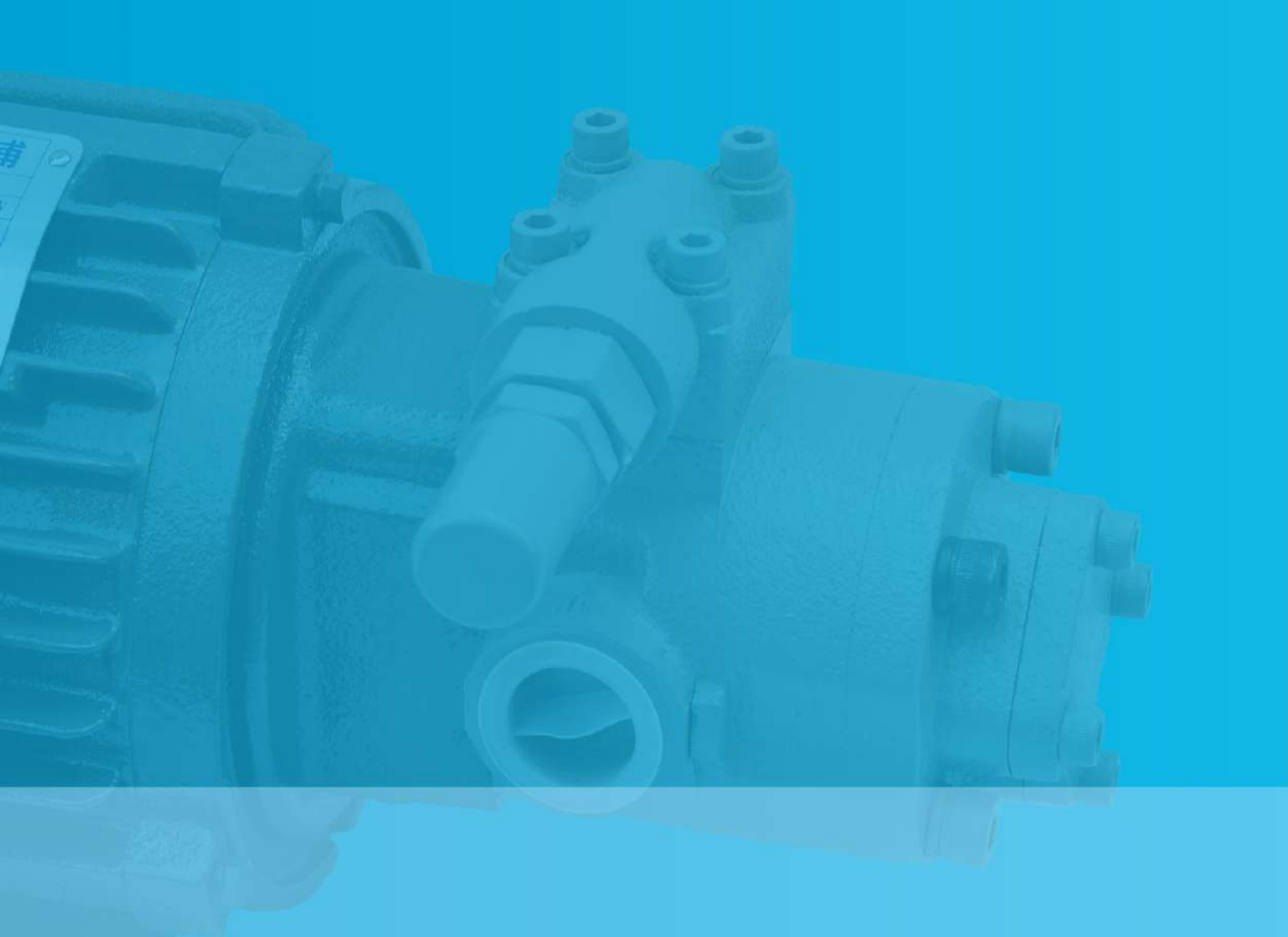
端子接线图 Terminal Wiring Diagram



- 注：低液位报警接线:1、3; 高液位报警接线:2、3;
低液位报警时1、3接通，报警解除时1、3断开;
高液位报警时2、3接通，报警解除时2、3断开。

Note: Low level alarm wiring:1,3; High level alarm wiring:2,3.
1 and 3 turn on when the low level alarm is activated and turn off when the alarm is deactivated.
2 and 3 turn on when the high level alarm is activated and turn off when the alarm is deactivated.

适用介质 Applicable medium	润滑油 lubrication oil	输入气压 Input air pressure	0.4-1.6MPa
注意事项 caveat	<ol style="list-style-type: none"> 使用时请勿超出最大使用压力 (最大使用压力 1.6MPa) ; 请使用推荐的润滑油, 使用其他溶液可能使泵损坏; 补充润滑油时, 请将加油口单向快插阀打开, 润滑油补充至上限位刻度线, 关闭加油口。 <ol style="list-style-type: none"> Do not exceed the maximum use pressure when using (Maximum operating pressure 1.6MPa); Please use the recommended lubricant, using other solutions may damage the pump; When replenishing the lubricant, please open the one-way quick-opening valve of the refueling port, and replenish the lubricant to the upper limit level scale line, and close the refueling port. 		



Oil pump

机床油泵

机床油泵概述 Oil pump Overview

机床油泵主要电机和各类泵浦（例如：叶轮泵浦；摆线泵浦）和调压阀组成。适用于车床，铣床和加工中心等各种加工设备的切削冷却润滑。

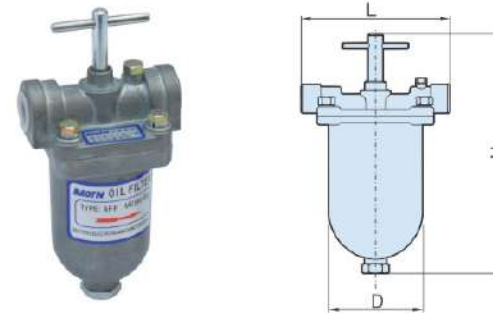
The machine oil pump consists of the main motor and various types of pumps (eg impeller pump; cycloid pump) and pressure regulator. It is suitable for cutting and cooling lubrication of various processing equipment such as lathes, milling machines and machining centers.

AFF型(Type)

自动过滤器 Automatic oil filter

功能 Functions

- 滤油面在承受压力下不至于弯曲变形，牢固可靠，滤油面积大，流量不会因过滤而减少。
- 清洗杂物简单，易操作，只需转动十字手柄，杂物即可掉入杯体中。
- 使用寿命长，安全无故障。
- The oil filtering surface cannot be bent and is reliable and firm under pressure, oil filter area is increased, and oil flow cannot be reduced due to filtering.
- The cleaned impurities are simple and easily operated, and the cross handle shall be placed into the cup body.
- Long service life, free of faults.



型号 Models	口径 Caliber(E)	H	L	D	流量flow(L/min)	过滤精度 Filtering precision (μm)	最大使用压力 Maximum application pressure (MPa)
AFF102	PT 1/4	160	75	55	25	250	3.5
AFF103	PT 3/8	160	75	55	35	250	3.5
AFF104	PT 1/2	230	100	75	50	250	3.5
AFF106	PT 3/4	230	100	75	80	250	3.5
AFF108	PT 1	270	120	75	105	250	3.5

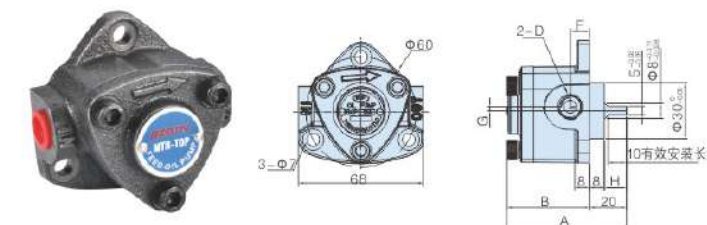
MTH-TOP型(Type)

给油泵 Oil supply pump

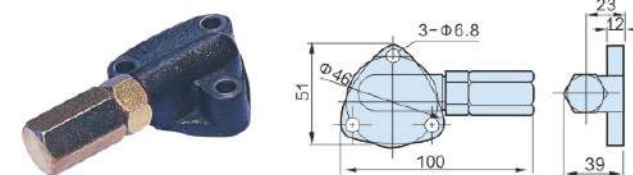
订货编制说明 Order description

MTH-TOP---

轴销形式 Shaft pin form	空白 Blank	标准轴 Standard shaft	C	加长轴(长4mm) Extension axis
泵浦类型 Pump type	10A-13A	10A-13A		
调压阀 Pressure regulating valve	空白 Blank	不带调压阀 None	T	带调压阀 Pressure regulating valve



MTH-TOP-13A



MTV-TOP-PT1/4 调压阀
Pressure regulating valve

压力调整范围: 0-5kgf/cm²
Pressure adjustment range: 0-5kgf/cm²

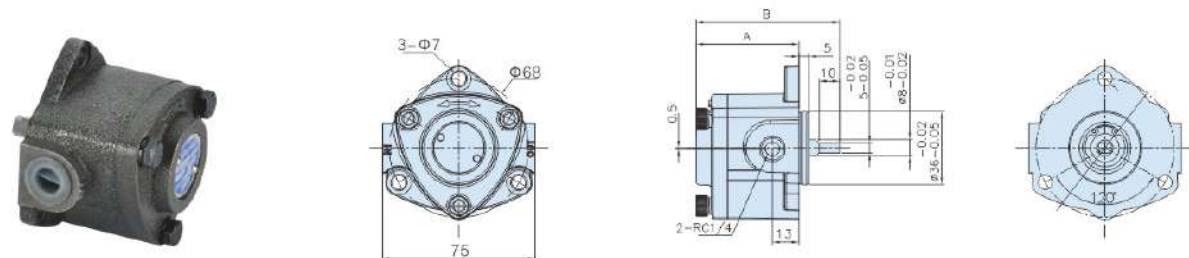
功能 Functions

- 该泵浦结构简单，自吸性强，输油平稳，噪音低，具有良好的高转速特性，适用于润滑系统中的低压连续润滑。
- 适用油品黏度：ISO VG 30-150给油泵浦
- The pump has features of simple structure, powerful self-suction, steady oil delivery and low noise, has sound high-speed rotation performance, and is suitable for low-pressure continuous lubricating in the lubricating system.
- Applicable oil variety: ISO VG 30-150 oil supply pump.

型号 Models	理论吐油量 Theoretical ejection capacity (mL/rev)	吐油量 Ejection capacity(L/min)		最高压力 Maximum pressure (MPa)	最高回转数 Maximum rotation count (rpm)	口径 Caliber(E)	A	B	D	F	G	H	重量 weight (kg)
		(1500rpm)	(1800rpm)										
MTH-TOP-10A	0.8	1.2	1.4	0.5	3000	PT1/8	56.5	36.5	Rc1/8	11	3	12	0.5
MTH-TOP-11A	1.5	2.2	2.7	0.5	2000	PT1/4	58.5	38.5	Rc1/4(1/4)	11	3	12	0.55
MTH-TOP-12A	2.5	3.7	4.5	0.5	1800	PT1/4	64.5	44.5	Rc1/4	11	3	12	0.6
MTH-TOP-13A	4.5	6.7	8.1	0.5	1800	PT3/8	78.5	58.5	Rc3/8	14	5.5	12	0.8

MTH-SBRB 型(Type)

双向摆线泵 Bi-directional cycloid pump



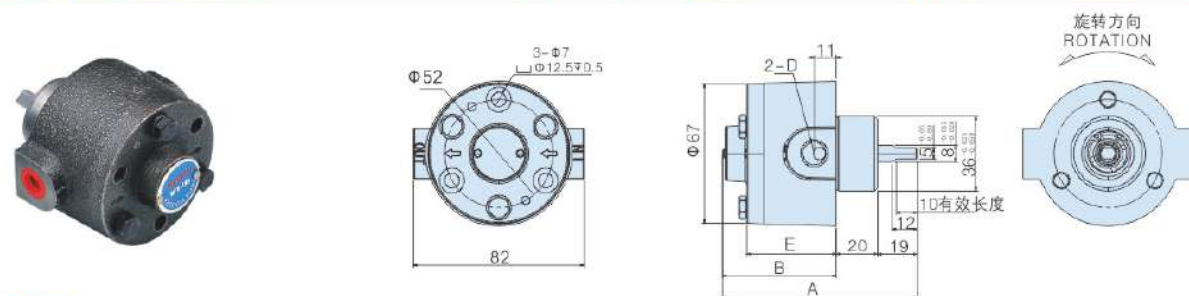
功能 Functions

- 该泵浦结构简单，自吸性强，输油平稳，噪音低，具有良好的高转速特性，适用于润滑系统中的低压连续润滑。该泵浦的特点是：双向摆线泵的设计必须确保无论是正转还是反转，油的流动始终向一个方向。双向摆线泵的进油口和出油口保持不变，泵轴旋转向可改变。
- 适用于一般正、逆转机械。如：车床、旋臂铣床制药机械、研磨机、各种冷冻机械、铣床等。
- The pump has features of simple structure, powerful self-suction performance, steady oil delivery, low noise and sound high revolution performance, and is suitable for low-pressure continuous lubricating in the lubricating system. The pump is characterized in that: the design of the bi-directional cycloid pump must ensure that, regardless of positive or negative rotation, the oil flows at a fixed direction. The oil inlet and oil outlet of the bi-directional cycloid pump must remain constant, and rotation direction of the pump can be changed.
- It is suitable for positive and negative rotation machinery, such as lathe, rotary arm mill machinery, grinding machine, cooler and mill etc.

型号 Models	理论吐油量 Theoretical ejection capacity (mL/rev)	吐出量 Ejection capacity(L/min)		最高压力 Maximum pressure (MPa)	最高回转数 Maximum rotation count (rpm)	口径 Caliber(E)	A	B	重量 weight (kg)
		1500rpm	1800rpm						
MTH-SBRB-2	1.8	2.7	3.24	0.5	2000	PT1/4'	41.5	61.5	0.8
MTH-SBRB-3	2.5	3.75	4.5	0.5	2000	PT1/4'	50.5	70.5	1.0

MTH-1RA 型(Type)

双向摆线泵 (可逆转式) Bi-directional cycloid pump (reversible type)



功能 Functions

- 该泵浦结构简单，自吸性强，输油平稳，噪音低，具有良好的高转速特性，适用于润滑系统中的低压连续润滑。该泵浦的特点是：双向摆线泵的设计必须确保无论是正转还是反转，油的流动始终向一个方向。双向摆线泵的进油口和出油口保持不变，泵轴旋转向可改变。
- 适用于一般正、逆转机械。如：车床、旋臂铣床制药机械、研磨机、各种冷冻机械、铣床等。
- The pump has features of simple structure, powerful self-suction performance, steady oil delivery, low noise and sound high revolution performance, and is suitable for low-pressure continuous lubricating in the lubricating system. The pump is characterized in that: the design of the bi-directional cycloid pump must ensure that, regardless of positive or negative rotation, the oil flows at a fixed direction. The oil inlet and oil outlet of the bi-directional cycloid pump must remain constant, and rotation direction of the pump can be changed.
- It is suitable for positive and negative rotation machinery, such as lathe, rotary arm mill machinery, grinding machine, cooler and mill etc.

型号 Models	理论吐油量 Theoretical ejection capacity (mL/rev)	吐出量 Ejection capacity(L/min)		最高压力 Maximum pressure (MPa)	最高回转数 Maximum rotation count (rpm)	口径 Caliber(E)	A	B	E	D	重量 weight (kg)
		1500rpm	1800rpm								
MTH-1RA-2FS	1.8	2.7	3.24	0.5	2000	PT1/4'	88.5	49.5	44	Rc1/4	1.1
MTH-1RA-3FS	2.5	3.75	4.5	0.5	2000	PT1/4'	92.5	53.5	48	Rc1/4	1.2

MTM 型(Type)

铁壳直结马达 Iron shell direct link motor

订货编制说明 Order description

泵浦连接方式 Pump connecting mode	MTM-Z 4 3 G H - T 12 C X	泵浦安装方式 Installation of the pump
Z 直插式 Direct plug		空白 Blank 标准安装 Standard installation
L 联轴式 Shaft coupler		X 旋转安装 Rotary installation
D 直插并倒装 Direct plug and inverse installation		泵浦轴类型 Types of the pump
电机功率 Motor power		空白 Blank 标准轴 Standard shaft
4 1/4HP(180W)		C 加长轴 Lengthened shaft
6 1/6HP(120W)		泵浦型号 Pump model
8 1/8HP(90W)		12 MTH-TOP-12A
电机电压 Motor voltage		13 MTH-TOP-13A
2 单相 Single phase 220V		调压阀类型 Adjustment valve types
3 三相 Three phases 220/380V		空白 Blank 无调压阀 Without adjustment valve
4 三相 Three phases 280/450V		T 有调压阀 With adjustment valve
5 三相 Three phases 280/415V		扇叶类型 Blade type
电机颜色 Motor color		空白 Blank 带扇叶 With blade
空白 Blank 标准色 Standard color		H 后出轴无扇叶 Without blade after shaft
G 绿色 Green		



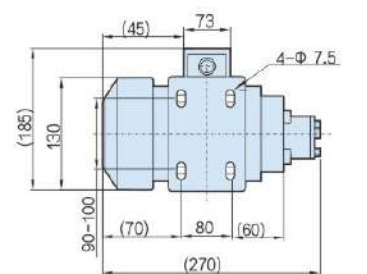
铁壳直结马达 (直插式)
Iron shell direct motor (direct plug)



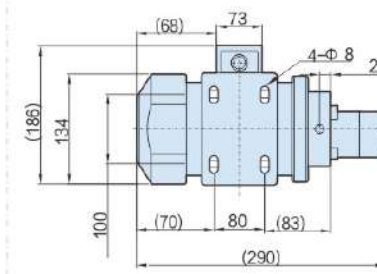
1/4HP 铁壳直结马达 (联轴器)
1/4 HP iron shell direct link motor (shaft coupler)



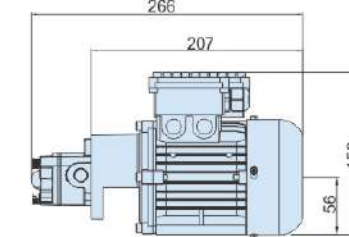
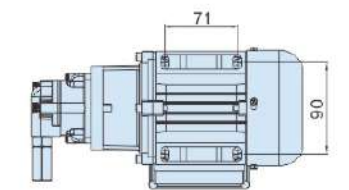
1/6HP 铁壳直结马达 (联轴器)
1/6 HP iron shell direct link motor (shaft coupler)



12A 不带调压, 总长 255
13A 不带调压, 总长 270
12A without pressure adjustment, total length of 255
12A without pressure adjustment, total length of 270



12A 调压, 总长 310
13A 调压, 总长 320
12A pressure adjustment, total length of 310
13A pressure adjustment, total length of 320



技术参数 Technical parameters

马力(HP)Horse power	1/8(90W)	1/6(120W)	1/4(180W)
电压 Voltage	110V/220V, 220V-380V, 220V/440V, 280V/415V		
极数Quantity of poles	4P		
时间定格 Time framing	连续 Continuous		
回转数Quantity of rotation	1400/1800rpm		
周波数Cycle of waveforms	50/60HZ		

说明 Notes:

- 该铁壳马达主要应用低压循环式冷却润滑系统。
- 本产品输油平稳，低噪音。
- 适用于主轴冷却及润滑，导轨润滑等场合。
- The iron shell motor shall be low-pressure cycle cooling and lubricating system.
- Oil delivery of the pipeline is steady and low noise.
- Applicable for main shaft cooling and lubricating, guide rail lubricating and other conditions.

订货编制说明 Order description

MTY-12 3 P - MTH-ROP-220VB

电机功率 Motor power

12	0.5HP
10	1HP
15	1.5HP
20	2HP
30	3HP

电机电压 Motor voltage

2	单相 Single phase 220V
3	三相 Three phases 220/380V
4	三相 Three phases 280/450V

泵浦规格 Pump specifications

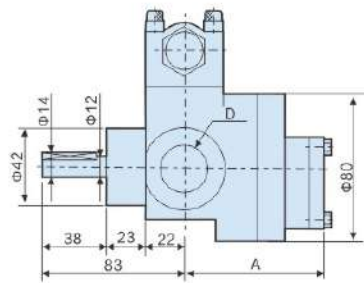
MTH-ROP	MTH-ROP 泵浦规格 MTH-ROP pump specifications
MTH-VP	MTH-VP 泵浦规格 MTH-VP pump specifications
MTH-TK3	MTH-TK3 泵浦规格 MTH-TK3 pump specifications
MTH-TK1	MTH-TK1 泵浦规格 MTH-TK1 pump specifications

电机类型 Motor types

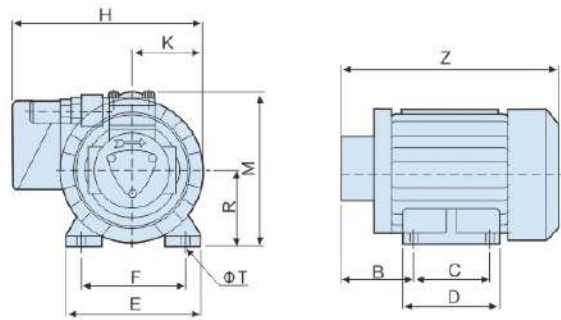
2	TK2马达配TK1泵浦 TK2 motor with TK1 pump
3	配TK3泵浦 With TK3 pump
P	配ROP泵浦 With ROP pump
V	配VP叶片泵 With VP blade pump



重油润滑泵
Heavy oil lubricating pump



重油马达
Heavy oil motor

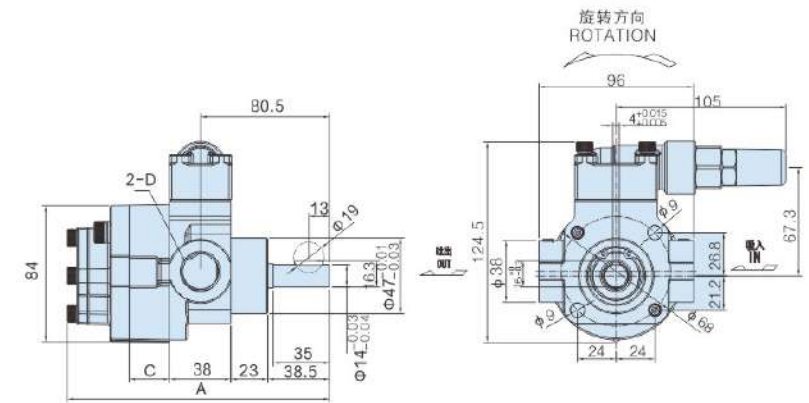


型号 Model	吐出量(理论值)mL/sec Ejection capacity (theoretical value)			最高压力 maximum pressure (MPa)	A	D
	1200rpm/min	1500rpm/min	1800rpm/min			
MTH-TK1504	4	6	7.2	2	62	3/4PT
MTH-TK1506	6	9	10.8	2	67	1/2PT 3/4PT
MTH-TK1508	9	13.5	16.2	2	71	1/2PT 3/4PT
MTH-TK1510	12	18	21.6	2	79	3/4PT

型号 Model	B	C	D	E	F	H	K	M	R	T	Z
1/2HP	76	90	116	145	112	210	79	152	71	10	244
1HP	72	100	121	156	125	225	86	172	80	10	249
2HP	73	125	157	175	140	248	100	191	90	12	282



重油泵浦
Heavy oil pump



说明 Notes:

适用于各种产业机械、工作母机、螺丝机、螺帽机、单能机、专用机、深孔钻专用机、锅炉燃烧机、大型机械用。

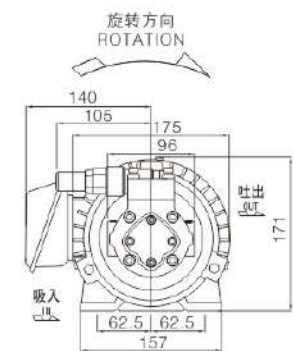
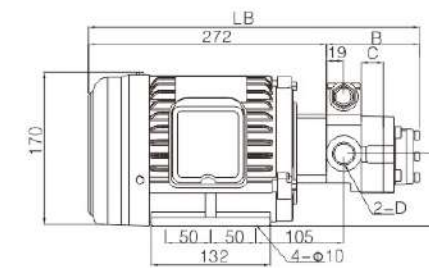
Applicable for various industrial machinery, workstation, screw machine, screw cap machine, special machine, deep hole drill, special machine, boiler combustor and large machinery.

型号Model	A	C	D
203VB	144.5	7	PT1/2
204VB	147.5	10	
206VB	152.5	15	
208VB	157.5	20	
210VB	162.5	25	PT3/4
212VB	167.5	30	
216VB	177.5	40	
220VB	187.5	50	

泵浦型号 Pump model	吐出量 Ejection capacity L/min	马达输出功率的最大压力(MPa) Maximum pressure of output power of motor		
		370W	750W	1500W
MTH-ROP-203VB	4.2	3.0	3.0	3.0
MTH-ROP-204VB	6.0	2.15	3.0	3.0
MTH-ROP-206VB	9.0	1.05	2.5	2.0
MTH-ROP-208VB	12.0	0.7	2.3	2.0
MTH-ROP-210VB	15.0	0.45	1.55	2.0
MTH-ROP-212VB	18.0	0.35	1.35	2.0
MTH-ROP-216VB	24.0	0.2	0.85	2.0
MTH-ROP-220VB	30.0	-	0.55	1.5

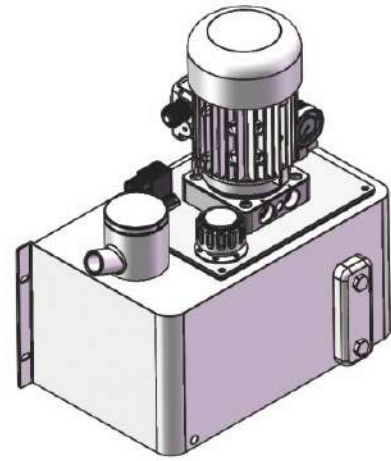


重油马达组
Heavy oil motor set



型号 Model	项目 sports event	LB	B	C	D
MTH-ROP-203VB		355	83	7	RC1/2 (G口径/ G1/2)
MTH-ROP-204VB		358	86	10	
MTH-ROP-206VB		363	91	15	
MTH-ROP-208VB		368	96	20	

型号 Model	项目 sports event	LB	B	C	D
MTH-ROP-210VB		373	101	25	RC3/4 (G口径/ G3/4)
MTH-ROP-212VB		378	106	30	
MTH-ROP-216VB		388	116	40	
MTH-ROP-220VB		398	126	50	



订货编制说明 Order description

BTH-□□-□□□□□□

容积式 / 抵抗式 Volumetric/resistant		油箱 Oil tank	
1	抵抗式 resistant	A	无回油装置 No return oil device
2	容积式 Volumetric	H	带回油装置 oil return device
油箱容积 Oil tank volume		液位开关 Level switches	
6	6L	D	上通电 Upper power supply
8	8L	空白	下通电 Lower power supply
15	15L	出油口管径 Outlet pipe diameter	
30	30L	1	接φ8管
50	50L	额定流量 Rated flow	
电机功率 Motor power		2	250mL/min
2	90W	5	500mL/min
3	120W		

性能与特点

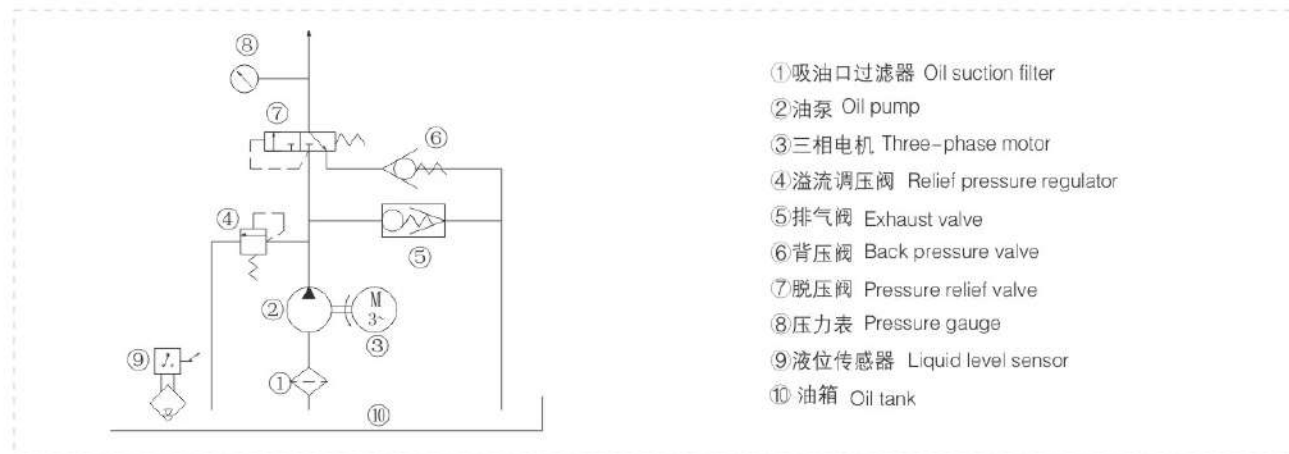
- 内置脱压阀结构可以实现自动脱压；调压阀防止系统超压，保证系统输出压力恒定；排气阀可以迅速排除润滑油内混入的空气，有利于泵启动后迅速起压。
- 本润滑泵使用的电机工作制为S1，带有散热风扇，可根据实际工况连续润滑或间歇润滑设备，而不会出现过热保护。
- 吸油行程可达500毫米，用户可根据实际需求选择油箱。
- 本润滑泵内所有控制阀均采用插装式结构，集成度高，调节安装简便。

Performance and Features

- Built-in depressurization valve structure can realize automatic depressurization; regulator prevents system overpressure and ensures constant system output pressure; air venting valve can quickly remove air mixed in the lubricant, which is conducive to the rapid start-up of the pump after the start-up pressure.
- This lubrication pump uses the motor working system for S1, with cooling fan, according to the actual working conditions of continuous lubrication or intermittent lubrication equipment, without overheating protection.
- The oil suction stroke can be up to 500 mm, and the user can customize the height of the oil tank according to the actual demand.
- All control valves in this lubrication pump are of cartridge structure with high integration and easy adjustment and installation.

BTH 润滑泵(组)系统原理图

BTH lubrication pump (group) system schematic diagram



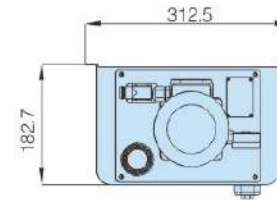
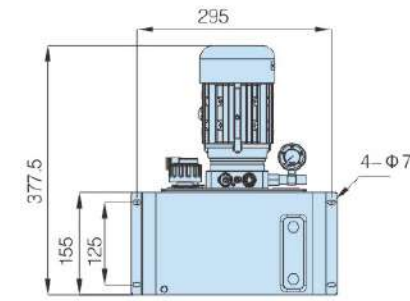
规格型号及技术参数 Specifications and technical parameters

型号 Type	电机 electric motor		控制功能 Control function	额定压力(MPa) Preset pressure	吐出量(mL/min) ejection volume	出油管径(mL/min) Oil pipe diameter	油箱容量(L) Oil tank capacity
	电压(V)voltage	输出功率(W)output power					
BTH-1/BTH-2	AC380V	90	外部PLC控制 Controlled by an external PLC	3.0	250	φ8	参考订货说明 See Ordering Information
		120			500		

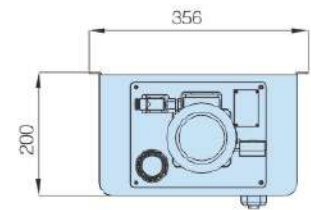
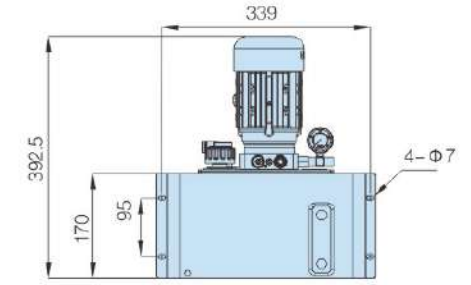
润滑泵 lubrication pump

产品外形尺寸图

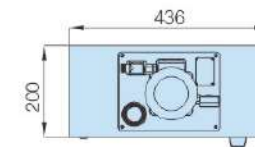
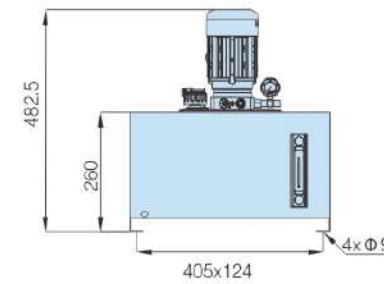
Product dimension figure



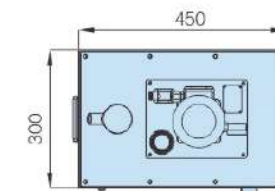
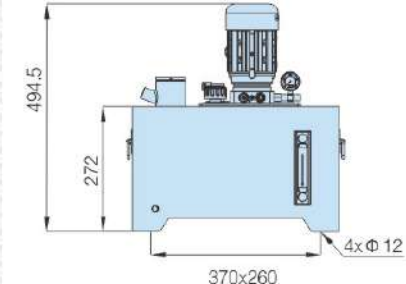
BTH-16/BTH-26
(无回油装置) (No oil return device)



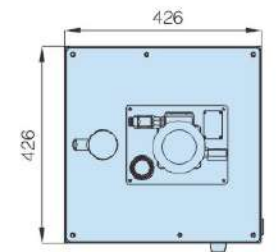
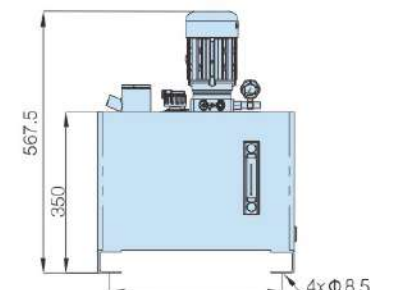
BTH-18/BTH-28



BTH-115/BTH-215



BTH-130/BTH-230



BTH-150/BTH-250



概述 / Overview

HLC润滑泵站备有电气程控器，通过简单编程，可实现自动连续或周期供油。可用于单线阻尼润滑系统(SLR)、递进式润滑系统(PRG)、定量容积式润滑系统(PDI)。广泛应用于玻璃、塑胶、机床、纺织等机械设备的润滑。

The HLC lubrication pump station is equipped with an electrical program controller, which can be programmed easily. Automatic continuous or periodic oil supply can be realized. It can be used in single-line damping lubrication system (SLR), progressive lubrication system (PRG), quantitative volumetric lubrication system (PDI). Widely used in the lubrication of glass, plastic, machine tools, textile and other mechanical equipment.

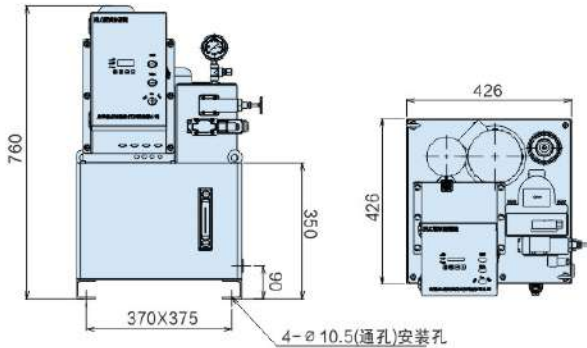
系统工作原理简介

润滑泵站接通工作电源后，并按程控器“操作流程”设置运行模式，使电机通电，齿轮泵开始工作。润滑油经过出油滤油器输出。系统的最高压力由溢流阀调定（出厂时调定为8MPa）。输出的润滑油进入至定量分配器内存油。当定量分配器充满润滑油后，电机和电磁换向阀失电，系统卸荷，定量分配器将内存的润滑油注入润滑点，完成一次注油过程。

Introduction to the working principle of the system

After the lubrication pump station is connected to the working power supply, set the operation mode according to the "operation flow chart" of the program controller, so that the motor is energized, and the gear pump starts to work. The lubrication oil is output through the oil outlet filter. The maximum pressure of the system is set by the overflow valve (set at 8MPa when leaving the factory). The output lubrication oil enters into the storage oil in the quantitative distributor. When the quantitative distributor is filled with lubrication oil, the motor and electromagnet reversing valve are de-energized, the system is unloaded, and the quantitative distributor injects the lubrication oil in the memory into the lubrication point to complete an oiling process.

产品外形尺寸图
Product dimension figure



注意事项

- 定量分配器尽量安装在润滑点集中处。主管内径必须 $\geq \phi 8$ 。
- 润滑泵站与定量分配器之间不允许安装单向阀，以防影响系统卸压。
- 润滑泵站出油口要安装滤油器，以确保系统油剂清洁，无杂质。
- 在连接定量分配器之前，应仔细冲洗（或吹净）所有管道，使管道净化，防止脏物进入油排和润滑点。
- 试车前松开每条油路最后一块油排的油塞，启动泵站，排净系统内空气后再拧紧，并仔细检查系统各连接处，不应有渗漏。
- 润滑系统中，所有螺纹密封处，不允许使用生胶带。
- 使用过程中应定期检查系统有无渗漏，定量分配器指示杆伸缩是否正常。

Precautions

- Dosing distributors should be installed as far as possible where the lubrication points are concentrated. The inner diameter of the main oil pipe must be $\geq \phi 8$.
- It is not allowed to install a check valve between the lubrication pump station and the quantitative distributor to prevent the system from being depressurized.
- oil filter should be installed at the oil outlet of the lubrication pump station to ensure that the system oil is clean and free of impurities.
- Before connecting the metering dispenser, all pipes should be carefully flushed (or blown out) to decontaminate them and prevent dirt from entering the oil drain and lubrication points.
- Before the test run, loosen the oil plug of the last oil drain of each oil circuit, start the pump station, drain the air in the system, and then tighten it, and carefully check the connections of the system, there should be no leakage.
- In the lubrication system, all thread seals are not allowed to use raw tape.
- During the use process, the system should be regularly checked for leakage, and whether the indicator rod of the quantitative distributor is properly extended or not.

规格型号及技术参数 Specifications and technical parameters

型号 Type	额定压力(MPa) Preset pressure	油箱容积(L) Fuel tank capacity	电机电压(V) Motor voltage	额定流量(L/Min) Limited Data	电机功率(W) Motor Power	液位开关 Level Switch
HLC-5038	8	50	三相380 three phase 380	1.4	370	220V 1A

润滑连接体与分配器 Lubrication connection body and distributor

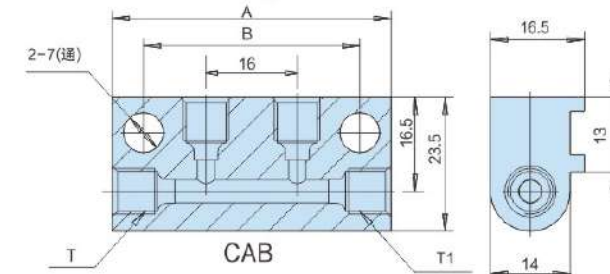
CAB/CAC连接体 CAB/CAC manifold

订货编制说明 Order description

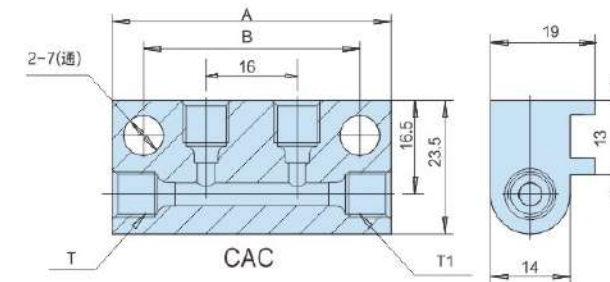


CAB连接体
CAB manifold

产品外形尺寸图
Product dimension figure



A = 出油口数*16+17 A = Number of oil outlets * 16 + 17
B = 出油口数*16+6 B = Number of oil outlets * 16 + 6



注:管径为 $\phi 8$ 、 $\phi 10$ 需选用CAC壳体
Note: Pipe diameters of $\phi 8$ and $\phi 10$ require the use of CAC shells.

CAB/CAC

出入口螺纹 Access port thread

1	表示出入口螺纹均为M8*1 It shows that the oil inlet threads are M8*1
2	表示入油口两端螺纹均为M10*1,出油口螺纹均为M8*1 It means that the threads at both ends of the oil inlet are M10*1, and the oil outlet threads are M8*1.
3	表示入油口两端螺纹均为PT1/8,出油口螺纹均为M8*1 It means that the thread at both ends of the oil inlet is PT1/8, and the thread of the oil outlet is M8*1.
4	表示出入口螺纹均为M10*1 It shows that the oil inlet threads are M10*1
5	表示入油口两端螺纹均为PT1/8,出油口螺纹为M10*1 It means that the thread at both ends of the oil inlet is PT1/8, and the thread of the oil outlet is M10*1.
6	表示入油口两端螺纹均为M10*1,出油口螺纹为PT1/8 It means that the thread at both ends of the oil inlet is M10*1, and the thread of the oil outlet is PT1/8.
7	表示出入口螺纹均为PT1/8 It shows that the oil inlet threads are PT1/8

出入口口数 Number of inlets and outlets

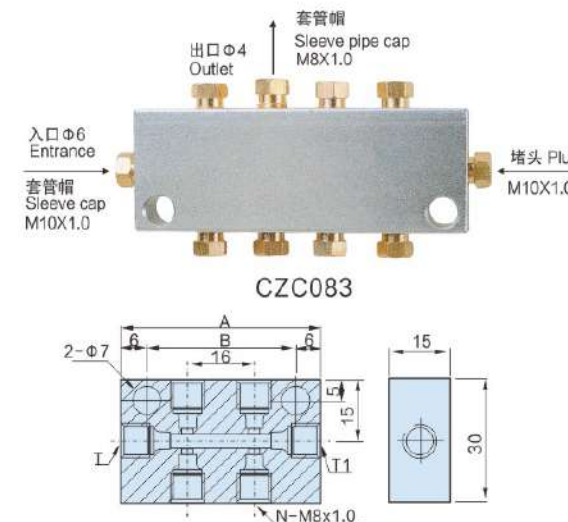
03	3个 Each
04	4个 Each
05	5个 Each
06	6个 Each

注:出入口口数可定做(3~32个)
CAC连接体只有5和7可选

Note: The number of inlet and outlet ports can be customized 3~32
Only 5 and 7 are available for CAC connectors.

CZC分配器 CZC distributor

规格型号及技术参数 Specifications and technical parameters

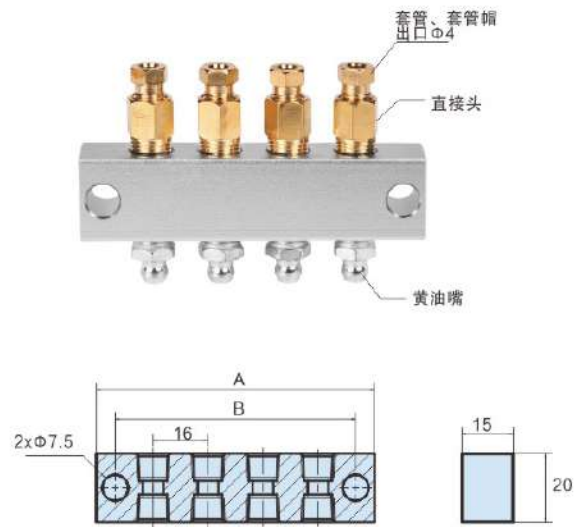


备注: M8x1.0对应 $\phi 4$ 的管径, M10x1.0对应 $\phi 6$ 的管径

型号 Model	T/T1	出口数 Quantity of outlets	A	B
CZC021 CZC022 CZC023	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	2	32	20
CZC041 CZC042 CZC043	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	4	48	36
CZC061 CZC062 CZC063	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	6	64	52
CZC081 CZC082 CZC083	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	8	80	68
CZC101 CZC102 CZC103	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	10	96	84
CZC121 CZC122 CZC123	$\phi 4/\phi 4$ $\phi 6/\phi 4$ $\phi 6/\phi 6$	12	112	99

润滑连接体与分配器 Lubrication connection body and distributor

CZK分配器 CZK distributor



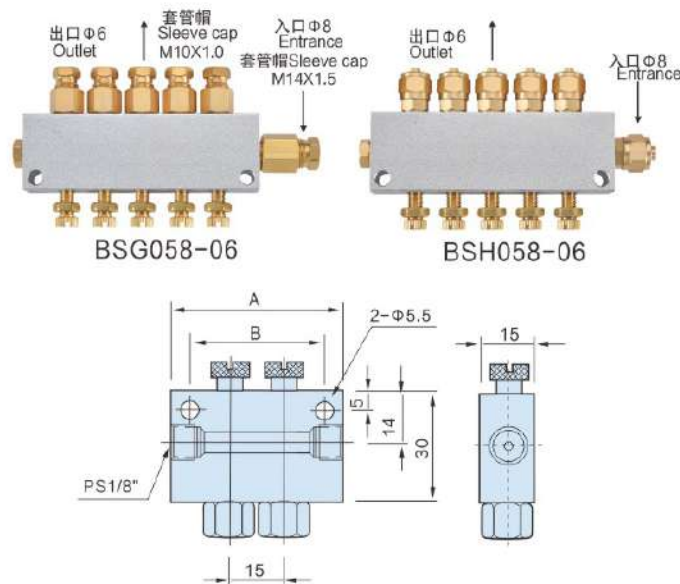
型号 Model	出口数 Number of exports	A	B
CZK023-01	1	33	22
CZK043-01	2	49	38
CZK063-01	3	65	54
CZK083-01	4	81	70
CZK103-01	5	97	86
CZK123-01	6	113	102
CZK143-01	7	129	118
CZK163-01	8	145	134
CZK183-01	9	161	150
CZK203-01	10	177	166

BSE/BSF调整型分配器 BSE/BSF adjustable distributor



型号 Model	入口口径 Inlet caliber	出口口径 Outlet caliber	出口数 Quantity of outlets	A	B
BSE024-04	φ4	φ4			
BSE026-04	φ6	φ4	2	47	37
BSE026-06	φ6	φ6			
BSE028-06	φ8	φ6			
BSE034-04	φ4	φ4			
BSE036-04	φ6	φ4	3	62	52
BSE036-06	φ6	φ6			
BSE038-06	φ8	φ6			
BSE044-04	φ4	φ4			
BSE046-04	φ6	φ4	4	77	67
BSE046-06	φ6	φ6			
BSE048-06	φ8	φ6			
BSE054-04	φ4	φ4			
BSE056-04	φ6	φ4	5	92	82
BSE056-06	φ6	φ6			
BSE058-06	φ8	φ6			
BSE066-04	φ6	φ4	6	107	97
BSE066-06	φ6	φ6			
BSE068-06	φ8	φ6			
BSE076-04	φ6	φ4	7	122	112
BSE076-06	φ6	φ6			
BSE078-06	φ8	φ6			
BSE086-04	φ6	φ4	8	137	127
BSE086-06	φ6	φ6			
BSE088-06	φ8	φ6			
BSE096-04	φ6	φ4	9	152	142
BSE096-06	φ6	φ6			
BSE098-06	φ8	φ6			
BSE106-04	φ6	φ4	10	167	157
BSE106-06	φ6	φ6			
BSE108-06	φ8	φ6			

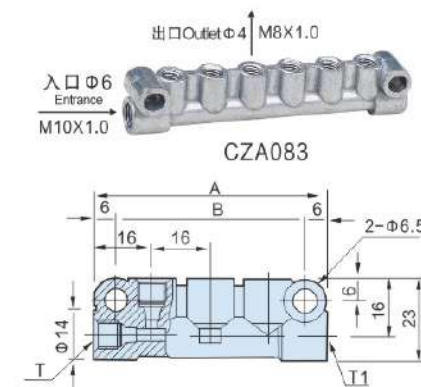
BSG/BSH调整抗震型分配器 BSG/BSH adjustable anti-shocking distributor



备注: BSF、BSG、BSH所有型号规格和尺寸参数与BSE相同。
Remarks: all specifications and dimensions of BSF, BSG and BSH are the same with those of BSE.

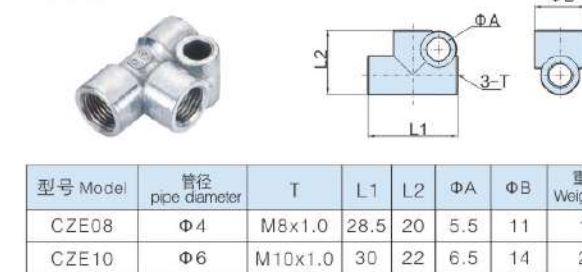
润滑连接体与分配器 Lubrication connection body and distributor

CZA连接体 CZA manifold



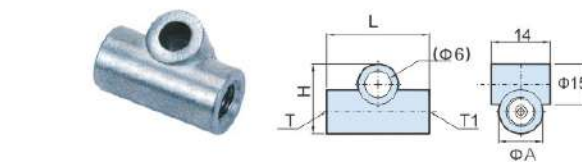
型号 Model	T/T1	出口口径 Outlet caliber	出口数 Quantity of inlets and outlets	A	B	型号 Model	T/T1	出口口径 Outlet caliber	出口数 Quantity of inlets and outlets	A	B
CZA041	φ4/φ4	2-φ4	4	48	37	CZA081	φ4/φ4	6-φ4	8	112	99
CZA042	φ4/φ6	2-φ4				CZA082	φ4/φ6	6-φ4			
CZA043	φ6/φ6	2-φ6			38	CZA083	φ6/φ6	6-φ6			102
CZA044	φ6/φ6	2-φ6				CZA084	φ6/φ6	6-φ6			
CZA051	φ4/φ4	3-φ4	5	64	51	CZA091	φ4/φ4	7-φ4	9	128	115
CZA052	φ4/φ6	3-φ4				CZA092	φ4/φ6	7-φ4			
CZA053	φ6/φ6	3-φ6			54	CZA093	φ6/φ6	7-φ6			118
CZA054	φ6/φ6	3-φ6				CZA094	φ6/φ6	7-φ6			
CZA061	φ4/φ4	4-φ4	6	80	67	CZA101	φ4/φ4	8-φ4	10	144	131
CZA062	φ4/φ6	4-φ4				CZA102	φ4/φ6	8-φ4			
CZA063	φ6/φ6	4-φ6			70	CZA103	φ6/φ6	8-φ6			134
CZA064	φ6/φ6	4-φ6				CZA104	φ6/φ6	8-φ6			
CZA071	φ4/φ4	5-φ4	7	96	83	CZA121	φ4/φ4	10-φ4	12	176	163
CZA072	φ4/φ6	5-φ4				CZA122	φ4/φ6	10-φ4			
CZA073	φ6/φ6	5-φ6			86	CZA123	φ6/φ6	10-φ6			166
CZA074	φ6/φ6	5-φ6				CZA124	φ6/φ6	10-φ6			

三通管 Tee Connectors



型号 Model	管径 pipe diameter	T	L1	L2	φA	φB	重量 Weight (g)
CZE08	φ4	M8x1.0	28.5	20	5.5	11	15
CZE10	φ6	M10x1.0	30	22	6.5	14	26

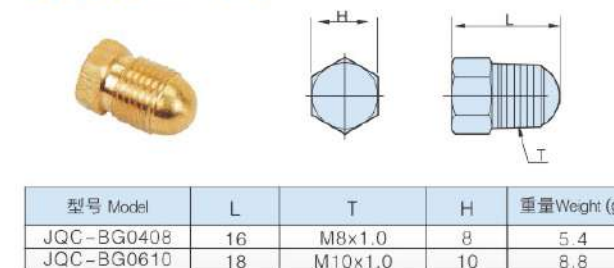
固定双接头 Fixed varying joints



型号 Model	管径 pipe diameter	T	T1	H	A	L	重量 Weight (g)
CZD0808	φ4xφ4	M8x1.0	M8x1.0	19.5	12	29	23
CZD0810	φ4xφ6	M8x1.0	M10x1.0	22	15	34	22
CZD1010	φ6xφ6	M10x1.0	M10x1.0	22	15	34	20
CZD1818	φ6xφ6	PS1/8	PS1/8	22	15	34	20

润滑铜接头 Lubrication copper joint

套管塞头 Sleeve plug



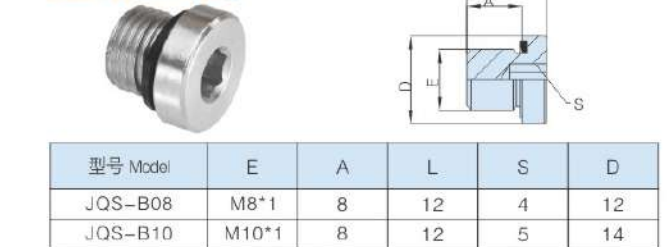
型号 Model	L	T	H	重量 Weight (g)
JQC-BG0408	16	M8x1.0	8	5.4
JQC-BG0610	18	M10x1.0	10	8.8

四通管 Four-way connector



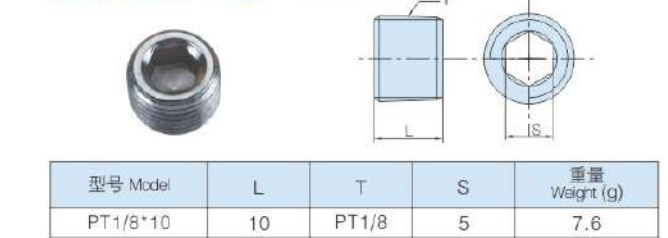
型号 Model	管径 pipe diameter	T	L	重量 Weight (g)
CZF08	φ4	M8x1.0	28	37
CZF10	φ6	M10x1.0	30	29

ED堵头 ED plug



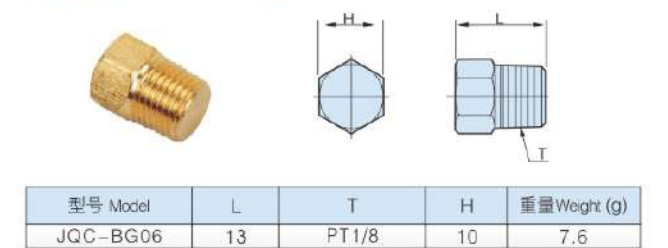
型号 Model	E	A	L	S	D
JQS-B08	M8*1	8	12	4	12
JQS-B10	M10*1	8	12	5	14

内六角堵头 Hexagon socket head



型号 Model	L	T	S	重量 Weight (g)
PT1/8*10	10	PT1/8	5	7.6

平端塞头 Closure Plug



型号 Model	L	T	H	重量 Weight (g)
JQC-BG06	13	PT1/8	10	7.6

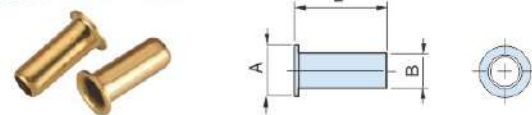
润滑铜接头 Lubrication copper joint

套管帽 One-Side-T Aapered Compression Bushing



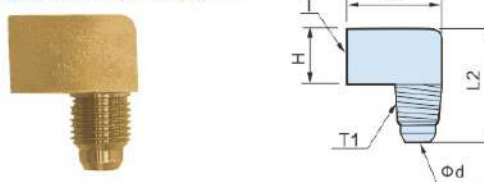
型号 Model	管径 Pipe diameter	Φd	L	T	H	重量 Weight (g)
JQC-BA04	Φ4	4.1	12	M8x1.0	8	3
JQC-BA06	Φ6	6.1	12.5	M10x1.0	10	4
JQC-BA08	Φ8	8.1	16	M14x1.5	14	9
JQC-BA08-1	Φ8	8.1	14	M12x1.0	12	9
JQC-BA10	Φ10	10.1	20	M16x1.5	17	10

管内衬 Tube Insert



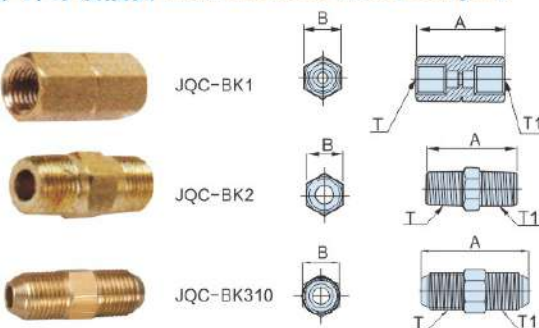
型号 Model	A	B	L	重量 Weight (g)
JQC-BF04-A	Φ4	Φ2	10.5	0.1
JQC-BF0425-A	Φ4	Φ2.5	10.5	0.1
JQC-BF06-A	Φ6	Φ4	10.5	0.2
JQC-BF08	Φ7.8	Φ6	13	0.25
JQC-BF10	Φ9.8	Φ8	15	0.28

直角接头 Elbow Adapter



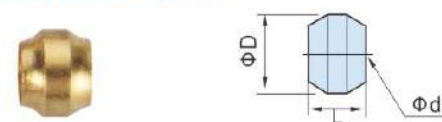
型号 Model	管径 Pipe diameter	Φd	L1	L2	T	T1	H	重量 Weight (g)
JQC-BH0610-Z	Φ6	4.5	20	24.5	M10x1.0	M10x1.0	12	23

内、外牙双接头 Inner and outer thread dual joint



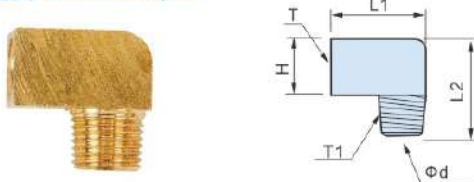
型号 Model	A	B	T	T1	重量 Weight (g)
JQC-BK108	25	10	M8x1.0	M8x1.0	10
JQC-BK110	28	12	M10x1.0	M10x1.0	15
JQC-BK118	25	12	PT1/8	PT1/8	10
JQC-BK208	20	10	M8x1.0	M8x1.0	9
JQC-BK210	25	12	M10x1.0	M10x1.0	10
JQC-BK218	25	10	PT1/8	PT1/8	10
JQC-BK21814	24	14	PT1/8	PT1/4	17
JQC-BK214	24	14	PT1/4	PT1/4	19
JQC-BK21018	28	10	M10x1.0	PT1/8	17
JQC-BK21438	30	17	PT1/4	PT3/8	26
JQC-BK310	29	10	M10x1.0	M10x1.0	18

套管 Compression Sleeve



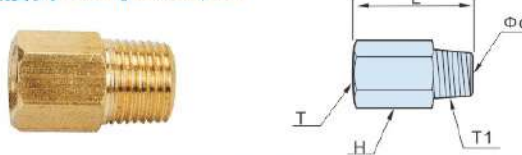
型号 Model	管径 Pipe diameter	Φd	D	L	重量 Weight (g)
JQC-BB04	Φ4	4.1	6	4.5	0.3
JQC-BB06	Φ6	6.1	8	5.5	0.6
JQC-BB08	Φ8	8.1	10.2	6	2
JQC-BB10	Φ10	10.1	12.4	8	3

直角接头 Elbow Adapter



型号 Model	管径 Pipe diameter	Φd	L1	L2	T	T1	H	重量 Weight (g)
JQC-BH0404	Φ4	1	18	16	M8x1.0	M4x0.7	10	11
JQC-BH0405	Φ4	1.5	18	16.5	M8x1.0	M5x0.8	10	12
JQC-BH0406	Φ4	2	18	18	M8x1.0	M6x1.0	10	12
JQC-BH0406-1	Φ4	2	18	18	M8x1.0	M6x0.75	10	13
JQC-BH0406-2	Φ4	2	20	20	M8x1.0	M6x1.0	10	15
JQC-BH0408	Φ4	3	18	18	M8x1.0	M8x1.0	10	13
JQC-BH0410	Φ4	5	18	18	M8x1.0	M10x1.0	10	13
JQC-BH0418	Φ4	5	18	18	M8x1.0	PT1/8	10	13
JQC-BH0414	Φ4	5.05	22	22	M8x1.0	PT1/4	13	32
JQC-BH0608	Φ6	3	20	20	M10x1.0	M8x1.0	12	20
JQC-BH0610	Φ6	4	20	20	M10x1.0	M10x1.0	12	20
JQC-BH0618	Φ6	6	20	20	M10x1.0	PT1/8	12	20
JQC-BH0614	Φ6	4	20	25	M10x1.0	PT1/4	14	29
JQC-BH0818	Φ8	5	26	24	M14x1.5	PT1/8	17	52
JQC-BH0818-1	Φ8	5	22	29	M12x1.0	PT1/8	17	52
JQC-BH0814	Φ8	5.4	26	26	M14x1.5	PT1/4	17	56
JQC-BH1018	Φ10	5	29	31	M16x1.5	PT1/8	19	70
JQC-BH1014	Φ10	7	30	31	M16x1.5	PT1/4	19	70

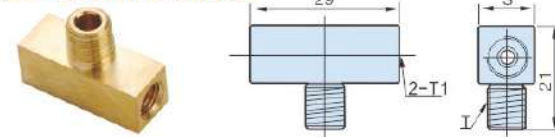
直接头 Straight Adapter



型号 Model	管径 Pipe diameter	Φd	L	T	T1	H	重量 Weight (g)
JQC-BD0406	Φ4	2.1	18	M8x1.0	M6	10	6
JQC-BD0406-1	Φ4	2.5	18	M8x1.0	M6x0.75	10	6
JQC-BD0408	Φ4	3	17	M8x1.0	M8x1.0	10	6
JQC-BD0410	Φ4	3	17	M8x1.0	M10x1.0	10	8
JQC-BD0418	Φ4	3	17	M8x1.0	PT1/8	10	8
JQC-BD0414	Φ4	3.5	18	M8x1.0	PT1/4	14	17
JQC-BD0608	Φ6	4	21	M10x1.0	M8x1.0	12	8
JQC-BD0610	Φ6	3	18	M10x1.0	M10x1.0	12	8
JQC-BD0618	Φ6	4	18	M10x1.0	PT1/8	12	8
JQC-BD0614	Φ6	5	22	M10x1.0	PT1/4	14	14
JQC-BD0810	Φ8	5	26	M14x1.5	M10x1.0	17	22
JQC-BD0818	Φ8	5	26	M14x1.5	PT1/8	17	22
JQC-BD0818-1	Φ8	5	22	M12x1.0	PT1/8	14	22
JQC-BD0814	Φ8	6	28	M14x1.5	PT1/4	17	26
JQC-BD1018	Φ10	5	28	M16x1.5	PT1/8	19	29
JQC-BD1014	Φ10	7	30	M16x1.5	PT1/4	19	33

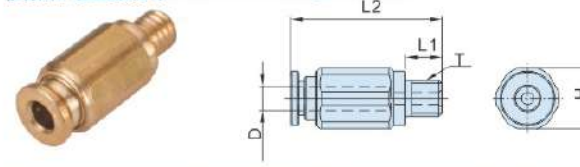
润滑铜接头 Lubrication copper joint

过度三通 Transitional tee



型号 Model	管径 Pipe diameter	T	T1	S
JQC-BGT0806	Φ4	M6x1.0	M8x1.0	35
JQC-BGT0808	Φ4	M8x1.0	M8x1.0	11
JQC-BGT0818	Φ4	PT1/8	M8x1.0	11
JQC-BGT1006	Φ6	M6x1.0	M10x1.0	12
JQC-BGT1008	Φ6	M8x1.0	M10x1.0	12
JQC-BGT1010	Φ6	M10x1.0	M10x1.0	12
JQC-BGT1018	Φ6	PT1/8	M10x1.0	12

快插式直接头 Push-in straight head



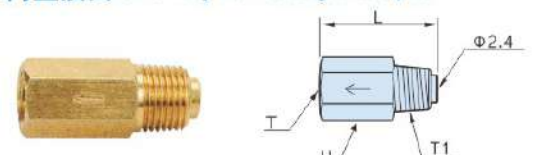
型号 Model	D(管径) D(Pipe diameter)	T	H	L1	L2
JQC-BDA0404	Φ4	M4X0.7	10	5	25
JQC-BDA0405	Φ4	M5X0.8	10	6	25
JQC-BDA0406	Φ4	M6X1.0	11	6	25
JQC-BDA0406-1	Φ4	M6X0.75	10	6	25
JQC-BDA0408	Φ4	M8X1.0	11	9	25
JQC-BDA0410	Φ4	M10X1.0	11	9	25
JQC-BDA0418	Φ4	PT1/8	11	9	24.5
JQC-BDA0606	Φ6	M6X1.0	13	9	24.5
JQC-BDA0606-1	Φ6	M6X0.75	13	9	24.5
JQC-BDA0608	Φ6	M8X1.0	13	7	24.5
JQC-BDA0610	Φ6	M10X1.0	13	9	25
JQC-BDA0618	Φ6	PT1/8	13	9	25
JQC-BDA0614	Φ6	PT1/4	14	11	26

快插式直角接头 Push-in right-angle connector



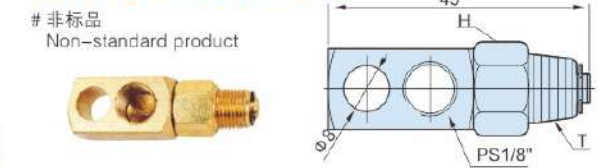
型号 Model	D(管径) D(Pipe diameter)	T	H	L1	L2
JQC-BHA0404	Φ4	M4X0.7	9	19	26
JQC-BHA0405	Φ4	M5X0.8	9	19.5	26
JQC-BHA0406	Φ4	M6X1.0	9	20.5	26
JQC-BHA0406-1	Φ4	M6X0.75	9	20.5	26
JQC-BHA0408	Φ4	M8X1.0	9	21.5	26
JQC-BHA0410	Φ4	M10X1.0	9	21.5	26
JQC-BHA0418	Φ4	PT1/8	9	21.5	26
JQC-BHA0610	Φ6	M10X1.0	11	23.5	27
JQC-BHA0618	Φ6	PT1/8	11	23.5	27

单向直接头 One-way flow straight adapter



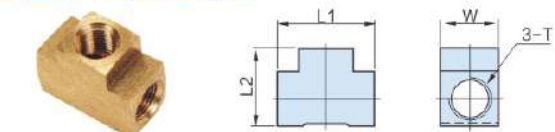
型号 Model	管径 Pipe diameter	L	T	T1	H	重量 Weight (g)
JQC-BD0418A	Φ4	23	M8x1.0	PT1/8	10	11
JQC-BD0618A	Φ6	24	M10x1.0	PT1/8	12	14

铜活动轮 Mobile copper joint



型号 Model	T	H	重量 Weight (g)
JQC-BQ011	PT1/8	14	44
JQC-BQ021	PT1/4	14	47

孔内三通 Tee in the hole



型号 Model	T	L1	L2	W	重量 Weight (g)
JQC-BT18	G1/8	27	21	14	34
JQC-BT14	G1/4	31	25	18	47
JQC-BT38	G3/8	40	31	21	86

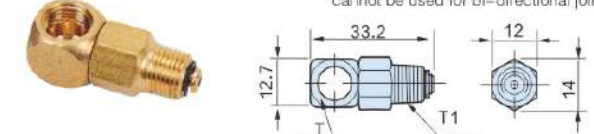
螺帽 Screw cap



型号 Model	管径 Pipe diameter	Φd	L	T	H	重量 Weight (g)
JQC-BP04	Φ4	4.05	13	M8x1.0	10	3

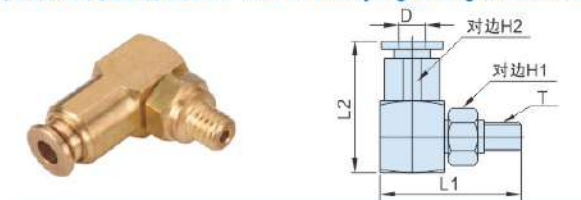
平面活动直角接头 Plane swivel elbow adapter

非标品 (在低压环境使用, 方便装管, 不能为双向接头使用)
Non-standard product (Used in low pressure environments, easy to install, cannot be used for bi-directional joints)



型号 Model	管径 Pipe diameter	T	T1	重量 Weight (g)
JQC-BE1818	Φ4	PS1/8	PT1/8	25

快插旋转直角接头 Push-in rotary right-angle connector

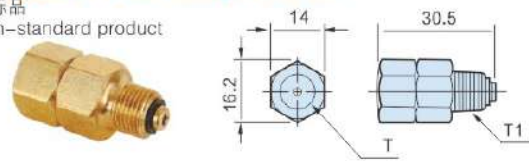


型号 Model	D(管径) D(Pipe diameter)	T	H1	H2	L1	L2
JQC-BCA0404	Φ4	M4X0.7	10	10	22.5	25
JQC-BCA0405	Φ4	M5X0.8	10	10	23.5	25
JQC-BCA0406	Φ4	M6X1.0	10	10	23.5	25.5
JQC-BCA0406-1	Φ4	M6X0.75	10	10	23.5	25.5
JQC-BCA0408	Φ4	M8X1.0	10	10	23	25.5
JQC-BCA0410	Φ4	M10X1.0	10	10	23	25
JQC-BCA0418	Φ4	PT1/8	10	10	23.5	25.5
JQC-BCA0608	Φ6	M8X1.0	13	13	28	28
JQC-BCA0610	Φ6	M10X1.0	13	13	28	28
JQC-BCA0618	Φ6	PT1/8	13	13	28	28

润滑铜接头 Lubrication copper joint

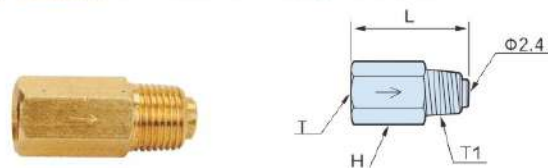
活动直接头 Awivel straight adapter

非标品
Non-standard product



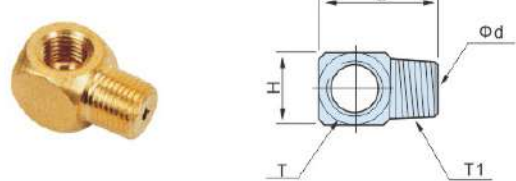
型号 Model	管径 Pipe diameter	T	T1	重量 Weight (g)
JQC-BW0418	Φ4	M8x1.0	PT1/8	28
JQC-BW0618	Φ6	M10x1.0	PT1/8	26
JQC-BW0118		PT1/8	PT1/8	26

反向直接头 Reverse Flow Straight Adapter



型号 Model	管径 Pipe diameter	L	T	T1	H	重量 Weight (g)
JQC-BD0418B	Φ4	22	M8x1.0	PT1/8	10	11
JQC-BD0618B	Φ6	23	M10x1.0	PT1/8	12	14

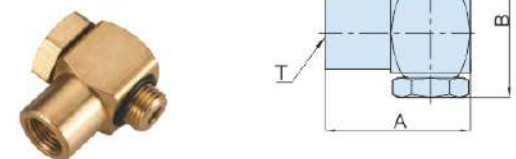
平面直角接头 Plane elbow adapter



型号 Model	管径 Pipe diameter	Φd	L	T	T1	H	重量 Weight (g)
JQC-BI0408	Φ4	2	20	M8x1.0	M8x1.0	12.0	15
JQC-BI0410	Φ4	2	20	M8x1.0	M10x1.0	13.0	15
JQC-BI0418	Φ4	1.5	20	M8x1.0	PT1/8	12.0	17
JQC-BI0418Z	Φ4	2	21	M8x1.0	Z1/8	12.0	17
JQC-BI0618	Φ6	2.5	22	M10x1.0	PT1/8	16.0	15
JQC-BI1818		2.5	21	PT1/8	PT1/8	13.0	15

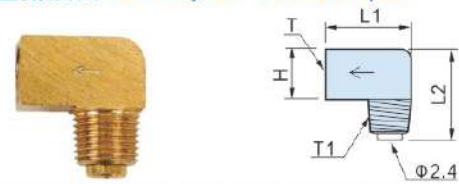
万向接头 Banjo fitting

非标品
Non-standard product



型号 Model	管径 Pipe diameter	T	T1	A	B	重量 Weight (g)
JQC-PBF0406	Φ4	M8x1.0	M6x1.0	22	21	20
JQC-PBF0408	Φ4	M8x1.0	M8x1.0	23	26	23
JQC-PBF0608	Φ6	M10x1.0	M8x1.0	27	23	22
JQC-PBF0610	Φ6	M10x1.0	M10x1.0	28	27	22

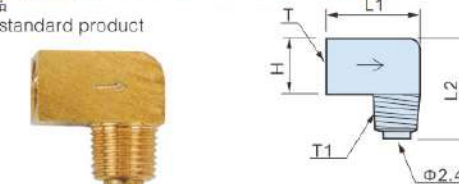
单向直角接头 One-way flow elbow adapter



型号 Model	管径 Pipe diameter	L1	L2	T	T1	H	重量 Weight (g)
JQC-BH0418A	Φ4	18	19	M8x1.0	PT1/8	10	14
JQC-BH0618A	Φ6	20	21	M10x1.0	PT1/8	12	21

反向直角接头 Reverse flow elbow adapter

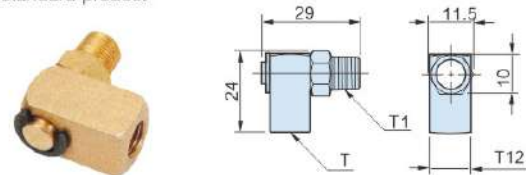
非标品
Non-standard product



型号 Model	管径 Pipe diameter	L1	L2	T	T1	H	重量 Weight (g)
JQC-BH0418B	Φ4	18	18	M8x1.0	PT1/8	10	14
JQC-BH0618B	Φ6	20	22	M10x1.0	PT1/8	12	21

活动直角接头 Plane swivel elbow adapter

非标品
Non-standard product



型号 Model	管径 Pipe diameter	T	T1	重量 Weight (g)
JQC-BC0418	Φ4	M8x1.0	PT1/8	38
JQC-BC0406	Φ4	M8x1.0	M6x1.0	38
JQC-BC0408	Φ4	M8x1.0	M8x1.0	38
JQC-BC0118		PT1/8	PT1/8	36

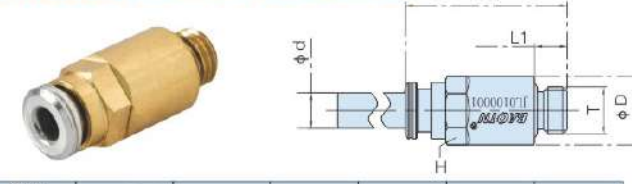
铜快速直接头 Quick copper through types

型号 Model	管径 Pipe diameter	T(外牙) T(Inter thread)
JQC-YKBD0418	Φ4	PT1/8
JQC-YKBD0618	Φ6	PT1/8
JQC-YKBD0614	Φ6	PT1/4
JQC-YKBD0638	Φ6	PT3/8
JQC-YKBD0818	Φ8	PT1/8
JQC-YKBD0814	Φ8	PT1/4
JQC-YKBD0838	Φ8	PT3/8

型号 Model	管径 Pipe diameter	T(外牙) T(Inter thread)
JQC-YKBD1018	Φ10	PT1/8
JQC-YKBD1014	Φ10	PT1/4
JQC-YKBD1038	Φ10	PT3/8
JQC-YKBD1214	Φ12	PT1/4
JQC-YKBD1238	Φ12	PT3/8
JQC-YKBD1614	Φ16	PT1/4
JQC-YKBD1638	Φ16	PT3/8

润滑铜接头 Lubrication copper joint

油气快插接头 oil and air quick connector



型号 Model	Φd ^{+0.015/-0.1}	T	L1	L2	ΦD	H
AJA0406	4	M6 x 1.0	5.5	21	11.5	S10
AJA0408		M8 x 1.0				
AJA0410		M10 x 1.0				
AJA0418		PT1/8				

适用介质 Applicable medium	润滑油、切削液 Oil, cutting fluids	使用压力 Pressure	≤3MPa	适用管路 Applicable piping	尼龙管 nylon tube
注意事项 Attention	1. 使用时请勿超出最大使用压力; 2. 请确保接入的管路表面无划伤, 裁断面平整、无尖锐、毛刺; 3. 接入管路时, 请将管路垂直于接口平面接入; 4. 请将管路安装到位, 安装后轻拉管路, 确保无法拉出。 1. Working pressure should be not higher than 3Mpa 2. Please make sure that the surface of the accessed pipeline is not scratched, and the cutting surface is flat and free of sharpness and burrs; 3. When connecting the pipeline, please connect the pipeline perpendicular to the interface plane; 4. Please install the pipeline in place, after installation, gently pull the pipeline, ensure that it can not be pulled out.				

安装方式 Installation

空白 Blank	直通式 straight-through
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安装螺纹 Mounting Threads

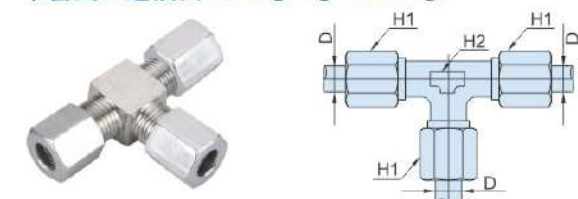
06	M6X1.0
08	M8X1.0
10	M10X1.0
18	PT1/8

接管直径 Tube Diameter

04	Φ 4
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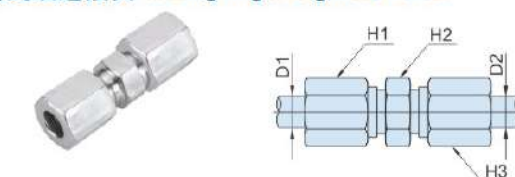
润滑油管附件 lubrication oil pipe accessories

卡套式三通接头 Cutting ring Tee fitting



型号 Model	D(管径) D(Pipe diameter)	H1(六方对边) H1(six sides opposite)	H2(四方对边) H2(four sides opposite)	压力等级 Pressure rating
JGS-KC0404	Φ4	10	9	LL
JGS-KC0606	Φ6	12	11	LL
JGS-KC0808	Φ8	17	12	L
JGS-KC0810	Φ8	17	12	L

卡套式双通接头 Cutting ring straight connector



型号 Model	D1(管径) D1(Pipe diameter)	D2(管径) D2(Pipe diameter)	H1(六方对边) H1(six sides opposite)	H2(六方对边) H2(six sides opposite)	H3(六方对边) H3(six sides opposite)	压力等级 Pressure rating
JGS-KS0404	Φ4	Φ4	10	11	10	LL
JGS-KS0406	Φ4	Φ6	10	11	12	LL
JGS-KS0606	Φ6	Φ6	12	11	12	LL
JGS-KS0608	Φ6	Φ8	14	14	17	L
JGS-KS0610	Φ6	Φ10	14	17	19	L
JGS-KS0810	Φ8	Φ10	17	17	19	L
JGS-KS0808	Φ8	Φ8	17	14	17	L
JGS-KS1010	Φ10	Φ10	19	17	19	L

卡套式直接头 Cutting ring straight fitting



型号 Model	D(管径) D(Pipe diameter)	T(外牙) T(outer thread)	H1(六方对边) H1(six sides opposite)	H2(六方对边) H2(six sides opposite)	压力等级 Pressure rating
JGS-KD0410	Φ4	M10X1.0	10	11	LL
JGS-KD0418	Φ4	PT1/8	10	11	LL
JGS-KD0608	Φ6	M8X1.0	12	11	LL
JGS-KD0610	Φ6	M10X1.0	12	11	LL
JGS-KD0618	Φ6	PT1/8	12	11	LL
JGS-KD0614	Φ6	PT1/4	14	14	LL
JGS-KD0810	Φ8	M10X1.0	17	14	L
JGS-KD0818	Φ8	PT1/8	17	14	L
JGS-KD0814	Φ8	PT1/4	17	14	L
JGS-KD1018	Φ10	PT1/8	19	17	L
JGS-KD1014	Φ10	PT1/4	19	17	L

卡套式直角接头 Cutting ring elbow fitting



型号 Model	D(管径) D(Pipe diameter)	T(外牙) T(outer thread)	H1(六方对边) H1(six sides opposite)	H2(四方对边) H2(four sides opposite)	压力等级 Pressure rating
JGS-KH0410	Φ4	M10X1.0	10	11	LL
JGS-KH0418	Φ4	PT1/8	10	11	LL
JGS-KH0606	Φ6	M6X1.0	12	11	LL
JGS-KH0608	Φ6	M8X1.0	12	11	LL
JGS-KH0610	Φ6	M10X1.0	12	11	LL
JGS-KH0618	Φ6	PT1/8	12	11	LL
JGS-KH0614	Φ6	PT1/4	12	12	LL
JGS-KH0818	Φ8	PT1/8	17	12	L
JGS-KH0814	Φ8	PT1/4	17	14	L
JGS-KH1018	Φ10	PT1/8	19	16	L
JGS-KH1014	Φ10	PT1/4	19	14	L

润滑油管附件 lubrication oil pipe accessories

钢丝护套 Steel wire protection sleeve

紧密型 Compact



标准型(0.5mm间隙) Standard (Interval of 0.5mm)

规格型号 Specifications	内径 Inner diameter	长度/条 Length / Article	使用范围 Use Range
ACA	Φ4/Φ6/Φ8/Φ10	2m/ 4m	与尼龙管软管配合使用 And with the use of nylon tube hose
ACB	Φ4/Φ6/Φ8/Φ10	2m/ 4m	

ACA-4 2000 (白White)

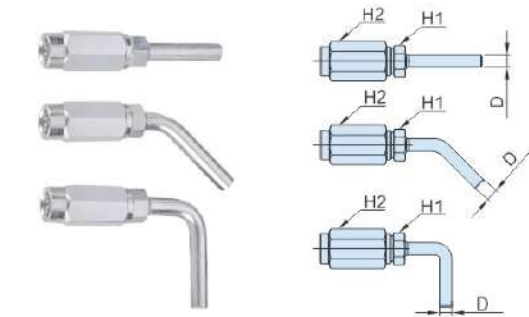
护套颜色: 空白: 表示黑色
白: 表示白色
Protection sleeve color: blank: black
White: white

表示长度(mm) Length (mm)

4/6/8/10: 表示配管外径为Φ4/Φ6/Φ8/Φ10
4/6/8/10: inner diameter of the piping Φ4/Φ6/Φ8/Φ10

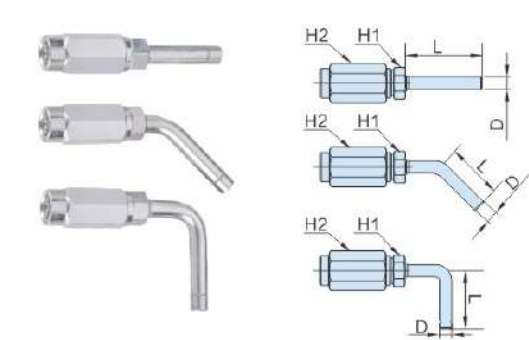
ACA: 表示标准钢丝护套
ACA: standard steel wire protection sleeve
ACB: 表示紧密钢丝护套
ACB: compact steel wire protection sleeve

TUB高压软管接头 High pressure hose connector



型号 Model	D(管头外径) D (outer diameter of pipe head)	H1(六方对边) H1 (six sides opposite)	H2(六方对边) H2 (six sides opposite)	接头形状 Connector shape
TUB-04	Φ4	10	12	直头 Straight head
TUB-06	Φ6	10	12	
TUB-08	Φ8	12	14	
TUB-04C	Φ4	10	12	45° 弯头 45° elbow
TUB-06C	Φ6	10	12	
TUB-08C	Φ8	12	14	
TUB-04L	Φ4	10	12	90° 弯头 90° elbow
TUB-06L	Φ6	10	12	
TUB-08L	Φ8	12	14	

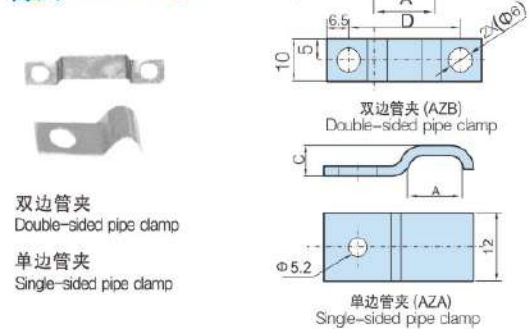
TUG高压软管接头 High pressure hose connector



型号 Model	D(管头外径) D (outer diameter of pipe head)	H1(六方对边) H1 (six sides opposite)	H2(六方对边) H2 (six sides opposite)	L(接头长度) L (joint length)	接头形状 Connector shape
TUG-1-06	Φ6	10	12	30	直头 Straight head
TUG-2-06	Φ6	10	12	20	
TUG-1-06C	Φ6	10	12	35	45° 弯头 45° elbow
TUG-2-06C	Φ6	10	12	22	
TUG-1-06L	Φ6	10	12	35	90° 弯头 90° elbow
TUG-2-06L	Φ6	10	12	22	

● 适配于高压管 Φ8.6XΦ4。
Suitable for high-pressure pipes Φ8.6XΦ4.

管夹 tube clamp



名称 Description	型号 Model	管径 Pipe diameter	夹管数 Pipe clamp quantity	A	C	D	重量(g) weight
单边管夹 Single-sided pipe clamp	AZA104	Φ4	1	6	5	/	1.2
	AZA106	Φ6	1	8.5	7	/	2.6
	AZA108	Φ8	1	10	9	/	2.2
	AZA110	Φ10	1	12.5	11	/	3.6
	AZA204	Φ4	2	11	5	/	1.8
	AZA206	Φ6	2	14.5	7	/	2.8
双边管夹 Double-sided pipe clamp	AZA304	Φ4	3	15	5	/	2.8
	AZB404	Φ4	4	18	5	31.5	3.0
	AZB504	Φ4	5	22	5	35.5	3.2
	AZB306	Φ6	3	22	7	35	3.4

● 可依客户要求订做。 Customized according to customers' needs

润滑油管 lubrication oil hose



名称 Description	型号 Model	管径规格(外径x内径) Pipe diameter specifications (outer diameter x inner diameter)	使用压力(MPa) Pressure applied	最小弯曲半径(mm) Minimum bending diameter	长度(m) Length	
尼龙管 Nylon pipe	TNB	Φ4xΦ2	4.0	R20	每卷 Each coil 100	
	TNB	Φ4xΦ2.5	3.1	R20	每卷 Each coil 100	
	TNB	Φ6xΦ4	3.0	R30	每卷 Each coil 100	
	TNB	Φ8xΦ6	1.9	R50	每卷 Each coil 100	
	TNB	Φ10xΦ8	1.5	R65	每卷 Each coil 100	
	TNC	Φ4xΦ2	4.0	R20	每卷 Each coil 100	
尼龙管 Nylon pipe	TNC	Φ4xΦ2.5	3.1	R20	每卷 Each coil 100	
	TNC	Φ6xΦ4	3.0	R30	每卷 Each coil 100	
	TNC	Φ8xΦ6	1.9	R50	每卷 Each coil 100	
	TNC	Φ10xΦ7.5	1.9	R65	每卷 Each coil 100	
	TNC	Φ10xΦ8	1.5	R50	每卷 Each coil 100	
	TNC	Φ12xΦ9	1.9	R70	每卷 Each coil 100	
高压管 High pressure pipe	TND	Φ6xΦ3	20	R40	每卷 Each coil 100	
	TND	Φ8.6xΦ4	35	R40	每卷 Each coil 100	
	TND	Φ9xΦ4	35	R50	每卷 Each coil 100	
	TND	Φ11xΦ6.3	21	R60	每卷 Each coil 100	
	TND	Φ14.3xΦ7.9	30	R80	每卷 Each coil 100	
	TMA	Φ4xΦ2	10.0	R10	每卷 Each coil 100	
铝管 Aluminum pipe	TMA	Φ6xΦ4	5.0	R15	每卷 Each coil 100	
	TMA	Φ8xΦ4	8.0	R20	每卷 Each coil 100	
	TMA	Φ8xΦ6	4.0	R20	每卷 Each coil 100	
	TMA	Φ10xΦ8	3.0	R25	每卷 Each coil 100	
	TMB	Φ4xΦ2	8.0	R10	每卷 Each coil 100	
	TMB	Φ6xΦ4	5.0	R15	每卷 Each coil 100	
镀铜铝管 Copper-coating aluminum pipe	TMB	Φ8xΦ4	8.0	R20	每卷 Each coil 100	
	TMB	Φ8xΦ6	4.0	R20	每卷 Each coil 100	
	TMC	Φ4xΦ2.7	10.0	R10	每卷 Each coil 15-30	
	TMC	Φ6xΦ4.4	8.0	R15	每卷 Each coil 15-30	
	TMC	Φ8xΦ6.4	6.0	R20	每卷 Each coil 15-30	
	TMC	Φ10xΦ8.4	5.0	R25	每卷 Each coil 15-30	
铜管 Copper pipe	TMC	Φ12xΦ10.4	4.0	R30	每卷 Each coil 15-30	
	TME	Φ6xΦ4	35	R20	每条 Each item 3	
	TME	Φ8xΦ6	35	R25	每条 Each item 3	
	TME	Φ10xΦ8	35	R30	每条 Each item 3	
	不锈钢管 Stainless steel pipe	TME	Φ6xΦ4	35	R20	每卷 Each coil 100
		TME	Φ8xΦ6	35	R25	每卷 Each coil 100
TME		Φ10xΦ8	35	R30	每卷 Each coil 100	

注: TNB材质为PA6, 不适用拖链, 使用温度不高于-10℃; TNC材质为PA11, 使用温度不高于-40℃; TME材质为304。
Note: The material of TNB is PA6, not applicable for drag chains, and the service temperature is not higher than -10℃; the material of TNC is PA11, and the service temperature is not higher than -40℃; the material of TME is 304.

高压软管 High-pressure flexible hose



TUA-4 1200-TH

空白: 表示无弹簧
TH: 表示外加弹簧
Blank: indicates that no spring
TH: indicates additional spring

表示长度(mm) Length (mm)

4/6/8: 表示配管外径为Φ4/Φ6/Φ8
4/6/8: outer diameter of the piping Φ4/Φ6/Φ8

表示类型 Types

耐压软管使用聚氨酯材料软管, 可在有切屑和工作环境恶劣的场所下使用, 适用温度范围为-20~+80℃。

The pressure-resistant flexible hose shall be polyurethane flexible hose, and can be used in cutting and serious working environment, and applicable temperature range is -20 to +80℃.

注明:

- 1、L为TND高压管长度(不包含接头长度);
- 2、L1为油管一端不包含油管进入接头座的长度;
- 3、油管总长度L0=L+L1*2

Notes:

- 1、L is the length of the TND high pressure tube (not including the connector seat);
- 2、L1 is the length of tubing at one end without the tubing going into the connector block.
- 3、Total length of fuel pipe L0=L+L1*2

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1 The length of the joint at both end of the tubing is L1	管径规格(内径X外径) Pipe diameter specification (inner diameter X outer diameter)
TUA-4	Φ4	10.0	R50	Φ13	可按客户要求定制 Tailored based on customers' needs	31	Φ9xΦ4
TUA-6	Φ6	10.0	R60			31	Φ9xΦ4
TUA-8	Φ8	10.0	R60			41	Φ11xΦ6.3

润滑油管 lubrication oil hose

高压软管 High-pressure flexible hose



TUB - 8 1800 LL - TH - 00

空白: 不充油 1/0/00/000; 表示管内充1/0/00/000#油脂
Blank: no oil filling 1/0/00/000 indicates that the tube is filled with 1/0/00/000 # grease

空白: 表示无弹簧 TH: 表示外加弹簧
Blank: Indicates that no spring TH: indicates additional spring

空白: 表示两端接头180°型接头
DL: 表示一端接头为180°型接头, 一端接头为90°型接头
DC: 表示一端接头为180°型接头, 一端接头为45°型接头
LL: 表示两端接头均为90°型接头
Blank: indicates a 180° joint at both ends
DL: indicates that one end connector is a 180° type connector and one end connector is a 90° type connector
DC: indicates that one end connector is a 180° type connector and one end connector is a 45° type connector
LL: indicates that both ends of the joint are 90° type joint

表示高压软管的长度L单位:mm
Indicates the length L of the high-pressure hose in mm

6/8/10: 表示配管外径为Φ6/Φ8/Φ10
6/8/10: outer diameter of the piping Φ6/Φ8/Φ10

TUB: 表示高压软管编号 TUB: indicates the high-pressure hose number

注明:
1、L为TND高压管长度(不包含接头接头座);
2、L1/L2/L3为油管两端不包含油管进入接头座的长度;
3、油管总长度L0=L+(L1/L2/L3);根据不同管径,计算需要的总长度。

Notes:
1. L is the length of the TND high pressure tube (not including the connector seat).
2. L1/L2/L3 is the length of the fuel pipe at the end excluding the length of the fuel pipe into the connector seat.
3. Total length of tubing L0=L+(L1/L2/L3); calculate the total length according to different tube diameters.

注: D表示180°型接头; L表示90°型接头; C表示45°型接头, 三种接头可任意组合。管长小于1m两端不允许同时接带角度的接头, 否则油管安装时将可能出现扭曲。

Note: D means 180° type joint; L means 90° type joint; C means 45° type joint, three kinds of joints can be combined arbitrarily. The hose length is less than 1m. Both ends are not allowed to connect with angled joints at the same time, otherwise the oil hose may be twisted during installation.

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1/L2/L3 The length of the joint at both ends of the tubing is L1/L2/L3	管径规格(内径X外径) Pipe diameter specification (inner diameter X outer diameter)
TUB-4	Φ4	35.0	R50	Φ14	可按客户要求定制 Tailored based on customers' needs	L1=34, L2=33	Φ9xΦ4
TUB-6	Φ6	35.0	R50			L1=41, L2=47, L3=34	Φ9xΦ4
TUB-8	Φ8	21.0	R60			L1=45, L3=40	Φ11xΦ6.3
TUB-10	Φ10	30.0	R80			L1=45, L2=56.5, L3=50	Φ14.3xΦ7.9

钢丝护套软管 steel wire sleeve flexible hose



TUC - 4 1200 - S J

空白: 软管为PA11尼龙管
N: 软管为PA6尼龙管
J: 软管为胶管
Blank: PA11 nylon tube hose is N: nylon hose as PA6 J: hose to hose

空白: ACB型钢丝护套
S: ACA型钢丝护套
A: 白色表面镀白锌的ACA型钢丝护套
B: 白色表面镀白锌的ACB型钢丝护套
F: 不带钢丝护套
Blank: ACB type steel wire sheath S: ACA type steel wire sheath A: ACA type steel wire sheath with white zinc plating on white surface B: ACB type steel wire sheath with white zinc plating on white surface F: Without wire sheath

表示长度(mm) Length (mm)

4/6/8: 表示配管外径为Φ4/Φ6/Φ8
4/6/8: outer diameter of the piping Φ4/Φ6/Φ8

表示类型 Types

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius	d2	L1 (mm)	L (mm)
TUC-4	Φ4	3.0	R20	M8x1.0	17	可按客户要求定制 Tailored based on customers' needs
TUC-6	Φ6	2.7	R30	M10x1.0	18	
TUC-8	Φ8	2.7	R50	M14x1.5	18	
TUC-10	Φ10	2.7	R65	M16x1.5	18	

钢丝护套软管是一种外套弹簧的尼龙管, 可在有切屑和工作环境恶劣的场所下使用, 适用温度范围为-20~+80℃。

The steel wire sleeve flexible hose is a set of nylon hose connecting spring outside, and can be used under environment with cut and serious working environment. The applicable temperature range of -20 to +80℃.

润滑油管 lubrication oil hose

外钢丝软管 Outer steel wire flexible hose



TUD-4 1200

表示长度(mm) Length expressed

4/6: 表示配管外径为Φ4/Φ6
4/6: outer diameter of piping Φ4/Φ6

表示类型 Type

注明:
1、L为黑纱管长度(不包含接头接头座);
2、L1为油管一端不包含油管进入接头座的长度;
3、油管总长度L0=L+L1*2

Notes:
1. L is the length of the black yarn tube (not including the connector seat);
2. L1 is the length of one end of the oil pipe not including the length of the oil pipe into the connector seat.
3. The total length of the oil pipe L0 = L + L1 * 2

外钢丝软管使用橡胶管, 可在有切屑和工作环境恶劣的场所下使用, 适用温度范围-20~+80℃。

The outer steel wire flexible hose shall be rubber hose, and can be used under the environment with scrap and working environment, and applicable temperature is -20 to +80℃.

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius (mm)	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1 The length of the joint at both ends of the tubing is L1
TUD-4	Φ4	10.0	R50	Φ13	可按客户要求定制 Tailored based on customers' needs	31
TUD-6	Φ6	10.0	R50			31

扣压式高压软管 Compression type high-pressure hose



TUE - - - - -

空白: 不充油 1/0/00/000; 表示管内充1/0/00/000#油脂
Blank: no oil filling 1/0/00/000 indicates that the tube is filled with 1/0/00/000 # grease

空白: 表示无弹簧 TH: 表示外加弹簧
Blank: Indicates that no spring TH: indicates additional spring

空白: 表示两端接头180°型接头
DL: 表示一端接头为180°型接头, 一端接头为90°型接头
LL: 表示两端接头均为90°型接头
Blank: indicates a 180° joint at both ends
DL: indicates that one end connector is a 180° type connector and one end connector is a 90° type connector
LL: indicates that both ends of the joint are 90° type joint

表示高压软管的L长度mm
Indicates the length L of the high-pressure hose, mm

4/6: 表示配管外径为Φ4/Φ6
4/6: outer diameter of the piping Φ4/Φ6

TUE: 表示扣压式软管编号
TUE: Indicates the number of the buckle type hose

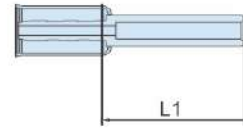
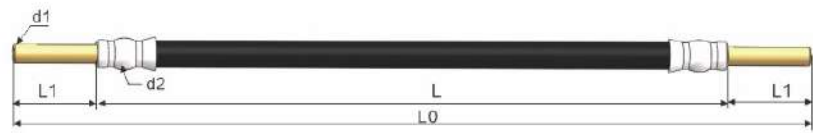
注明:
1、L为TND高压管长度(不包含接头接头座);
2、L1/L2为油管一端不包含油管进入接头座的长度;
3、油管总长度L0=L+(L1/L2);根据不同管径,计算需要的总长度。

Notes:
1. L for the TND high-pressure tube length (does not include the connector seat);
2. L1/L2 is the length of one end of the fuel pipe not including the fuel pipe into the connector seat.
3. The total length of the oil pipe L0 = L + (L1 / L2); according to different pipe diameter, calculate the total length required.

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius (mm)	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1/L2 The length of the joint at both ends of the tubing is L1/L2	管径规格(内径X外径) Pipe diameter specification (inner diameter X outer diameter)
TUE-4	Φ4	35.0	R50	Φ13	可按客户要求定制 Tailored based on customers' needs	L1=36, L2=32	Φ9xΦ4
TUE-6	Φ6	35.0	R50			L1=36, L2=32	Φ9xΦ4

润滑油管 Lubrication oil hose

扣压式中压软管 Buckle Type Medium Pressure Hose



- 空白: 不充油 1/0/00/000; 表示管内充 1/0/00/000#油脂
Blank: no oil filling 1/0/00/000; indicates that the tube is filled with 1/0/00/000 # grease
- 空白: 表示无弹簧 TH: 表示外加弹簧
Blank: indicates that no spring TH: indicates additional spring
- 空白: 表示两端接头180°型接头
Blank: indicates a 180° joint at both ends
- 表示高压软管的L长度mm
Indicates the length L of the high-pressure hose, mm
- 6: 表示配管外径为Φ6
6: outer diameter of the piping Φ6
- TUF: 表示扣压式软管编号
TUF: indicates the number of the buckle type hose

- 注明:
- L为TNI中压管长度(不包含接头接头座);
 - L1为油管一端不包含油管进入接头座的长度;
 - 油管总长度 $L_0=L+2L_1$;根据不同管径,计算需要的总长度。
- Notes:
- L is the length of TNI medium-pressure tube (excluding the connector header).
 - L1 is the length of one end of the fuel pipe not including the fuel pipe into the connector seat.
 - the total length of the oil pipe $L_0=L+2L_1$; according to different pipe diameter, calculate the total length required.

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius (mm)	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1 The length of the joint at both ends of the tubing is L1	管径规格(内径X外径) Pipe diameter specification (inner diameter X outer diameter)
TUF-6	Φ6	5.0	R50	Φ10.6	可按用户需求定制 Tailored based on customers' needs	L1=27	Φ8.6xΦ4.2

可拆式高压软管 Detachable high-pressure hose



- 空白: 不充油 1/0/00/000; 表示管内充 1/0/00/000#油脂
Blank: no oil filling 1/0/00/000; indicates that the tube is filled with 1/0/00/000 # grease
- 空白: 表示两端接头180°型接头
DL: 表示一端接头为180°型接头, 一端接头为90°型接头
DC: 表示一端接头为180°型接头, 一端接头为45°型接头
LL: 表示两端接头均为90°型接头
Blank: indicates a 180° joint at both ends
DL: indicates that one end connector is a 180° type connector and one end connector is a 90° type connector
DC: indicates that one end connector is a 180° type connector and one end connector is a 45° type connector
LL: indicates that both ends of the joint are 90° type joint
- 表示高压软管的长度L单位:mm
Indicates the length L of the high-pressure hose in mm
- 6: 表示配管外径为Φ6
6: outer diameter of the piping Φ6
- 1: 表示管接头长度为标准型 2: 表示管接头长度为较短型
1: indicates that the pipe joint length is standard type
2: indicates that the pipe joint length is shorter type
- TUG: 表示高压软管编号 TUG: indicates the high-pressure hose number

- 注明:
- L为TND高压管长度(不包含接头接头座);
 - L1/L2/L3为油管两端不包含油管入接头座的长度;
 - 油管总长度 $L_0=L+(L1/L2/L3)$;根据不同管径,计算需要的总长度。如左上图示,油管总长为 $L_0=L+L1+L3$
 - 管长小于1m时两端不允许同时带角度的接头,否则油管安装时将可能出现扭曲。
 - 高防腐型高压软管
- Notes:
- L is the length of the TND high pressure tube (not including the connector seat).
 - L1/L2/L3 is the length of the fuel pipe at the end excluding the length of the fuel pipe into the connector seat.
 - Total length of tubing $L_0=L+(L1/L2/L3)$; calculate the total length according to different tube diameters. As shown in the upper left figure, the total length of the oil pipe is $L_0=L+L1+L3$.
 - When the pipe length is less than 1 m, joints with angles are not allowed at both ends, otherwise the oil pipe may become twisted during installation.
 - High corrosion resistance high pressure hose

规格型号 Specifications	配管外径d1 Piping outer diameter	使用压力(MPa) Applied pressure	最小弯曲半径(mm) Minimum bending radius	最大外接圆直径d2 Maximum circumscribed circle diameter d2	L(mm)	油管两端接头长度L1/L2/L3 The length of the joint at both ends of the tubing is L1/L2/L3	管径规格(内径X外径) Pipe diameter specification (inner diameter X outer diameter)
TUG-1-6	Φ6	35.0	R40	Φ14	可按用户需求定制 Tailored based on customers' needs	标准型: L1=44, L2=55.5, L3=32 较短型: L1=34, L2=46.5, L3=32	Φ8.6xΦ4

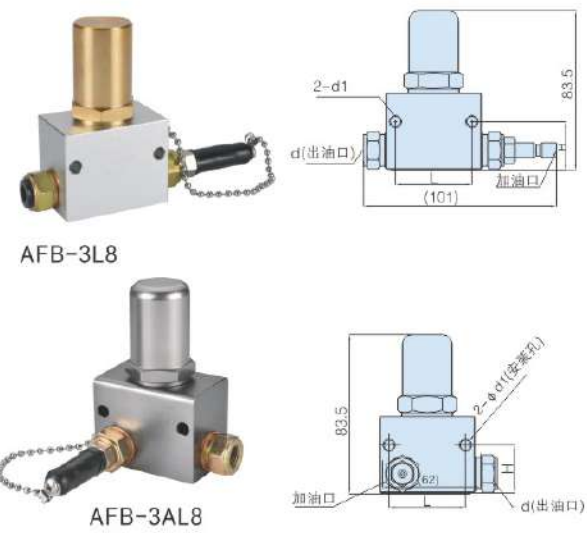
AFA 过滤器 AFA Filter



型号 Model	最大工作压力 Maximum operating pressure (MPa)	最大流量 Maximum flow (L/min)	过滤精度 Filtering precision (μm)	IN x OUT	重量 Weight (kg)
AFA4030L	3.0	3.0	40	PT1/8xPT1/8	0.3

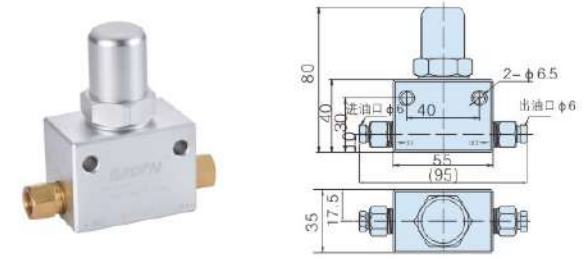
注: 底部设有六角扳手位以便拆卸清洗

油脂过滤器 Grease filter



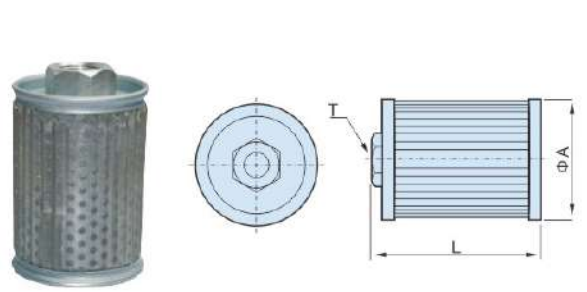
型号 Model	额定工作压力 Rated working pressure (MPa)	外形尺寸 Dimension (mm)			过滤精度 Filtering precision	d
		L	H	d1		
AFB-3L6	20.0	30	20	Φ4.5	80目	1/8
AFB-3L8		40	25	Φ5.5		1/8
AFB-3L10		45	30	Φ6.5		1/4
AFB-3L12		55	35	Φ6.5		3/8
AFB-3AL8		40	25	Φ5.5		1/8
AFB-3AL10		45	30	Φ6.5		1/4
AFB-3AL12		55	35	Φ6.5		3/8

AFK 油气用过滤器 AFK Oil filter for oil-air system



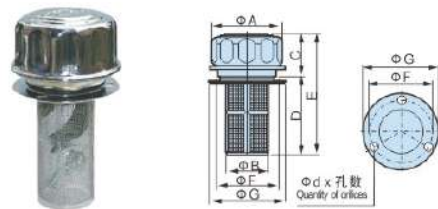
型号 Model	最大工作压力 Maximum operating pressure (MPa)	过滤精度 Filtering precision (μm)	接管直径 Connecting hose diameter
AFK-0514	3.5	3.0	Φ6

滤油网 Suction screen



型号 Model	A	T	L	过滤精度(μm) Filtering precision	重量(g) Weight
AFC02	54	PS1/4	95	150	110
AFC03	54	PS3/8	85	150	110
AFC04	64	PS1/2	101	150	125
AFC06	64	PS3/4	133	150	140
AFC08	64	PS1"	158	150	180
AFC10	64	1-1/4"	178	150	190
AFC12	83	1-1/2"	194	150	320
AFC16	102	2"	210	150	420
AFC20	158	2-1/2"	262	150	1200
AFC24	158	3"	262	150	1210
AFC32	206	4"	379	150	2450

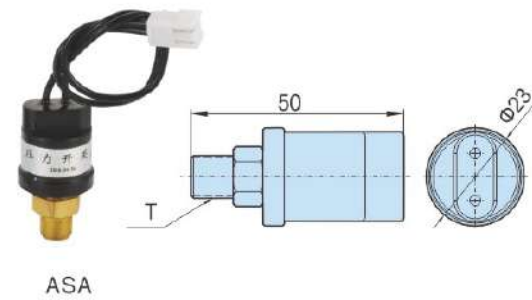
加油口 filling strainer



型号 Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	孔数 Quantity of pores	过滤精度(μm) Filtering precision	重量(kg) Weight
AFE-1162	53	31	31	68	99	45.5	53	Φ5.5x3	40	0.07
AFE-1163	80	48	47	90	137	71	87	Φ5.5x3	40	0.19

压力开关 Pressure switch

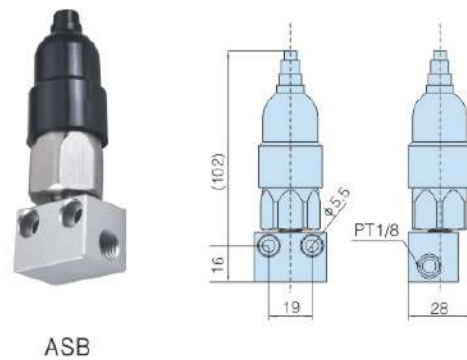
膜片式压力开关 Diaphragm pressure switch



品名 Description	型号 Model	工作方式 working	接通压力 (No) Connecting pressure (MPa)	断开压力 (No) Disconnecting pressure (MPa)	螺纹 Screw thread (T)
膜片式 Diaphragm	ASA-4018P	常开 NO	4.0	3.0	NPT1/8
	ASA-01518P	常开 NO	0.15	0.05	
	ASA-0318P-1	常开 NO	0.3	0.1	
	ASA-0318P	常开 NO	0.3	0.21	
	ASA-0418P	常开 NO	0.4	0.2	
	ASA-0618P	常开 NO	0.6	0.3	
	ASA-1218P	常开 NO	1.2	0.6	
	ASA-2018P(油脂)	常开 NO	2.0	1.2	
	ASA-3018P(油脂)	常开 NO	3.0	2.0	
	ASA-01918	常闭 NC	0.19	0.21	
ASA-0618	常闭 NC	0.6	1.0		
ASA-01518P-A	常开 NO	0.15	0.05		
ASA-2518P(油脂)	常开 NO	2.5	1.5		

备注:ASA-2018P; ASA-2518P; ASA-3018P用于油脂类产品。

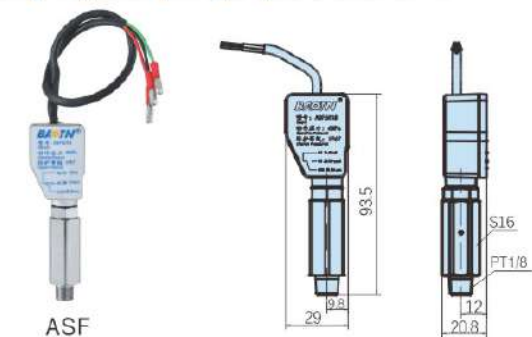
柱塞式压力开关 Plunger type diaphragm pressure switch



品名 Description	型号 Model	工作方式 working	接通压力 (No) Connecting pressure (MPa)	断开压力 (No) Disconnecting pressure (MPa)	螺纹 Screw thread (T)
柱塞式 Plunger type	ASB6018P-00	常开 NO	6.0	4.0	PT1/8
	ASB4018P-00	常开 NO	4.0	3.0	

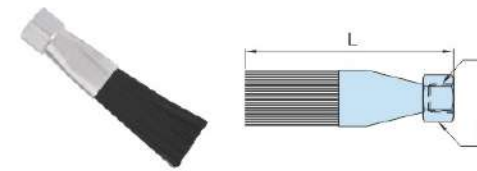
备注:ASB6018P; ASB4018P用于油脂类产品。

柱塞式压力开关 Plunger type diaphragm pressure switch



品名 Description	型号 Model	工作方式 working	接通压力 (No) Connecting pressure (MPa)	断开压力 (No) Disconnecting pressure (MPa)	螺纹 Screw thread (T)
柱塞式 Plunger type	ASF4018P	常开 NO	4.0	3.0	PT1/8
		常闭 NC			
	ASF6018P	常开 NO	6.0	4.5	
		常闭 NC			

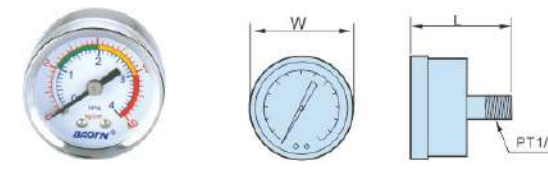
油刷 Oil brush



型号 Model	T	H(六方对边) H (six sides opposite)	L(长度) L (length)
ABB-PT1/8	PT1/8	14	87

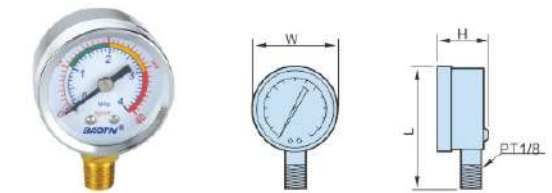
压力表 Pressure gauge

埋入式压力表 Burial pressure gauge



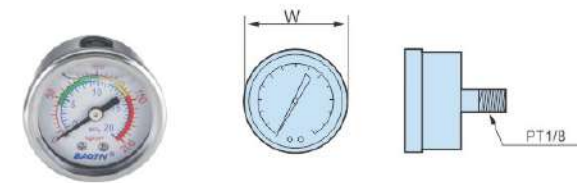
品名 Description	型号 Model	规格 Specifications (MPa)	W	L	重量 Weight (g)
埋入式压力表 Burial pressure gauge	AMA-40M	4.0	42	38	53
	AMA-60M	6.0	42	38	53

直立式压力表 Vertical pressure gauge



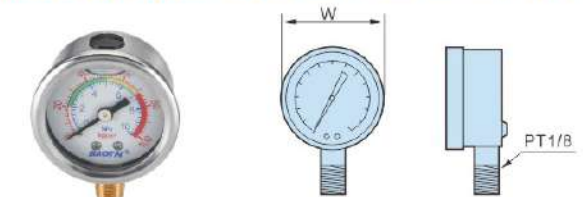
品名 Description	型号 Model	规格 Specifications (MPa)	W	L	H	重量 Weight (g)
直立式压力表 Vertical pressure gauge	AMA-40Z	4.0	42	56.5	24.5	50
	AMA-60Z	6.0	42	56.5	24.5	50

充油埋入式压力表 Punch oil burial pressure gauge



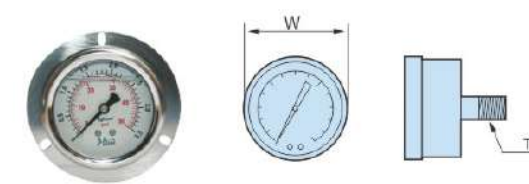
品名 Description	型号 Model	规格 Specifications (MPa)	W	L	重量 Weight (g)
充油埋入式压力表 Punch oil burial pressure gauge	AMC-100M	10.0	46.5	44	82
	AMC-200M	20.0	46.5	44	82

充油直立式压力表 Punching oil vertical pressure gauge



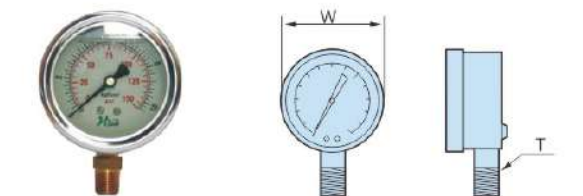
品名 Description	型号 Model	规格 Specifications (MPa)	W	L	H	重量 Weight (g)
充油直立式压力表 Punching oil vertical pressure gauge	AMC-100Z	10.0	46.5	61	25	75
	AMC-200Z	20.0	46.5	61	25	75

充油埋入式压力表 Punch oil burial pressure gauge



型号 Model	规格 Specifications (MPa)	盘面直径 Disc diameter	T
AMD-□□□M	0.2-40.0	1.5", 2", 2.5", 3", 4", 5", 6"	PT1/8, PT1/4

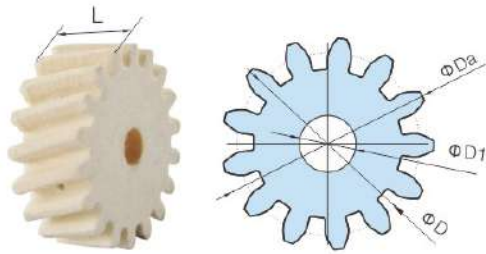
充油直立式压力表 Punching oil vertical pressure gauge



型号 Model	规格 Specifications (MPa)	盘面直径 Disc diameter	T
AMD-□□□Z	0.2-40.0	1.5", 2", 2.5", 3", 4", 5", 6"	PT1/8, PT1/4

注: AMD-3503018M表示规格35MPa, 盘面直径3", 螺纹规格PT1/8的冲油埋入式压力表。
Note: AMD-3503018M represents a pressure gauge with a specification of 35MPa, a plate diameter of 3", and a thread specification of PT1/8.

润滑毛毡齿轮 Lubrication pinion



型号 Model	M(模数)	Z(齿数)	D(分度圆)	D1(内孔)	Da(齿顶圆)	L(厚度)	α(压力角)	β(螺旋角)		
ABA-152512-C	1.5	25H	37.50	∅12	40.5	20	20°	0°		
ABA-201712-C	2.0	17H	34	∅12	38	25				
ABA-301712-C	3.0	17H	51	∅12	57	30				
ABA-401712-C	4.0	17H	68	∅12	76	40				
ABA-501720-C	5.0	17H	85	∅20	95	50				
ABA-601720-C	6.0	17H	102	∅20	114	50				
ABA-801720-C	8.0	17H	136	∅20	136	80				
ABA-1001720-C	10.0	17H	170	∅20	190	100				
ABA-1201630-C	12.0	16H	192	∅30	216	60				
ABA-152512-CL	1.5	25H	40	∅12	43	20			20°	19°
ABA-201712-CL	2.0	17H	36	∅12	40.2	25				
ABA-201812-CL	2.0	18H	38	∅12	42	25				
ABA-301712-CL	3.0	17H	54	∅12	60	30				
ABA-301812-CL	3.0	18H	57	∅12	63.1	30				
ABA-401712-CL	4.0	17H	72	∅12	80.2	40				
ABA-501720-CL	5.0	17H	90	∅20	100.2	50				
ABA-601720-CL	6.0	17H	108	∅20	120.2	50				
ABA-801720-CL	8.0	17H	144	∅20	160.3	80				
ABA-1001720-CL	10.0	17H	180	∅20	200.4	100				
ABA-1201630-CL	12.0	16H	203	∅30	228	60				
ABA-152512-CR	1.5	25H	40	∅12	43	20	20°	19°		
ABA-201712-CR	2.0	17H	36	∅12	40.2	25				
ABA-301712-CR	3.0	17H	54	∅12	60	30				
ABA-401712-CR	4.0	17H	72	∅12	80.2	40				
ABA-501720-CR	5.0	17H	90	∅20	100.2	50				
ABA-601720-CR	6.0	17H	108	∅20	120.2	50				
ABA-801720-CR	8.0	17H	144	∅20	160.3	80				
ABA-1001720-CR	10.0	17H	180	∅20	200.4	100				
ABA-1201630-CR	12.0	16H	203	∅30	228	60				

订货编制说明 Order description

ABA-15 25 12-C 齿轮形状 Gear shape

- C 直齿轮 Spur gear
- CL 左旋齿轮 Left-handed gear
- CR 右旋齿轮 Right-handed gear

齿轮内孔孔径(mm) Cog-hole aperture (mm)

12 内孔孔径为 ∅12 Inner hole diameter is ∅12

齿轮齿数 Number of gear teeth

25 齿轮齿数为 25齿 The gear teeth are 26 teeth

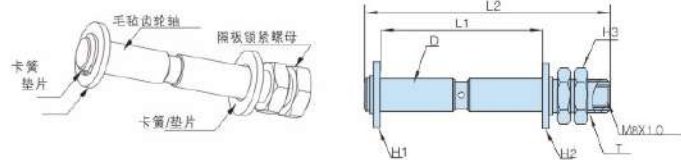
齿轮模数 Module of gear

15 齿轮模数为 1.5模 The gear module is 1.5

20 齿轮模数为 2.0模 The gear module is 2.0

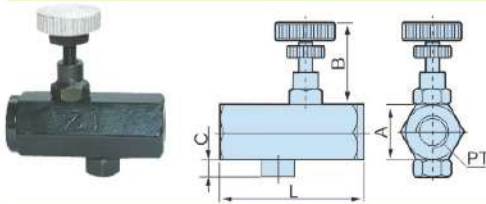
直齿计算公式: $D=M*Z; Da=(Z+2)*M$ 斜齿计算公式: $D=M*Z/\cos\beta; Da=(Z+2)*M/\cos\beta$; $(\cos 19^\circ = 0.9455185)$ 订购时,注意确认螺旋角β值!

毛毡齿轮支架 Felt gear bracket



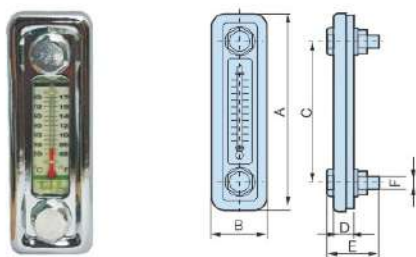
型号 Model	(D)轴径 Shaft diameter	H1	H2	H3	L1	L2	T
ABA-L50-20	∅12	20	20	20	21	45	M12*1.5
ABA-L50-25	∅12	20	20	20	26	50	M12*1.5
ABA-L50-30	∅12	20	20	20	31	55	M12*1.5
ABA-L50-40	∅12	20	20	20	41	65	M12*1.5
ABA-L50-50	∅20	24	24	24	51	80	M20*2.5
ABA-L50-60	∅20	24	24	24	61	125	M20*2.5
ABA-L50-80	∅20	24	24	24	81	145	M20*2.5
ABA-L50-100	∅30	24	24	24	101	165	M20*2.5

AVA 流量控制阀 Flow control valve



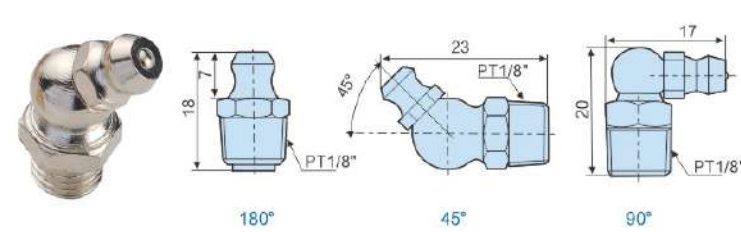
型号 Model	口径 caliber PT	A (mm)	B (mm)	C (mm)	L (mm)	流量 Flow (l/min)	最高压力 maximum pressure (MPa)	重量(kg) Weight
AVA-02	1/4"	24	38	7	62	12	25.0	0.23
AVA-03	3/8"	24	38	7	70	20	25.0	0.24
AVA-04	1/2"	32	44	10	81	30	25.0	0.49

AMB 油位镜 Fluid level gudge



型号 Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	重量(kg) Weight
AMB-3	118	41	80	16.5	39	M10	0.19
AMB-5	178	50	127	19	47	M12	0.35

ADA 黄油嘴 ADA Grease nipples



品名 Article description	形式 Model	规格 Specifications	重量 Weight(g)
45° 黄油嘴 45° buter grease nipple	ADA-PT1/8 45°	PT1/8" × 45°	8.7
直角黄油嘴 Right-angle grease nipple	ADA-PT1/8 90°	PT1/8" × 90°	9.2
直黄油嘴 Straight hydraulic grease nipples	ADA-PT1/8	PT1/8" × 180°	4.8

油杯 Oil cup

针阀式注油杯 Needle valve oil cup

型号 Model	最大容量 Maximum capacity (cm ³)	牙纹 Thread screw
ADB-16	16	PT1/8
ADB-25	25	M10x1
ADB-50	50	
ADB-100	100	

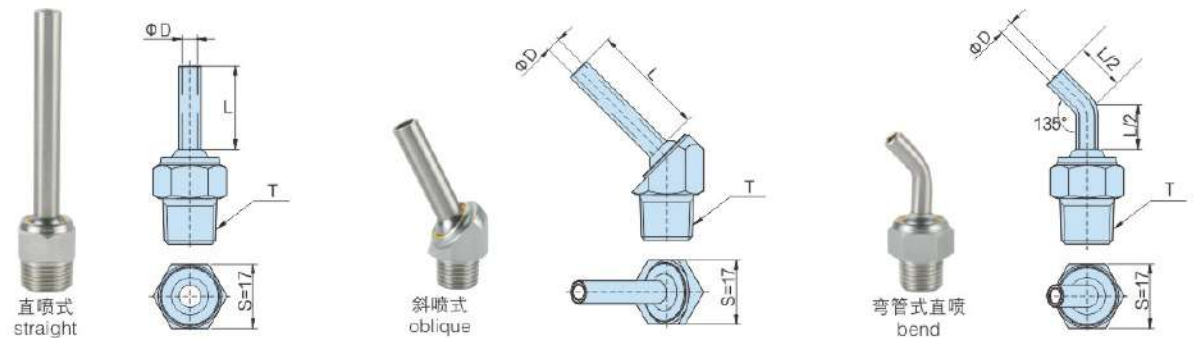
弹簧盖式直角油杯 Spring cap right-angle oil cup

型号 Model	牙纹 Thread screw
ADC-306	M6x1
ADC-308	M8x1
ADC-310	M10x1
ADC-318	R1/8

弹簧盖式直油杯 Spring cap straight-oil cup

型号 Model	牙纹 Thread screw
ADC-106	M6x1
ADC-108	M8x1
ADC-110	M10x1
ADC-112	M12x1.5
ADC-116	M16x1.5

AIA 型高压万向喷嘴 AIA Type High pressure universal nozzle



订货编制说明 Order description

喷嘴类型 Nozzle type

A	直喷式(球面 180°) Direct spray type(spherical 180°)
B	斜喷式(球面 135°) Inclined gush type(spherical 135°)

材质类型 Material type

1	304不锈钢 304 stainless steel
2	铁 iron
3	铜 copper

安装牙纹 Dental lamination (T)

18	PT1/8
14	PT1/4
38	PT3/8
12	PT1/2
1010	M10x1.0

喷嘴角度 Nozzle Angle

空白	直通式 180° Straight through 180°
1	弯管式 150° 150° bend type
2	弯管式 135° 135° bend type
3	弯管式 120° 120° bend type

喷嘴前端孔形状 Nozzle Angle

1	圆形喷嘴 Circular nozzle
2	扁型喷嘴 Flat nozzle

喷嘴长度 Nozzle length (L)

10	10mm
20	20mm
.....
80	80mm

喷嘴内孔管径 Nozzle diameter (D)

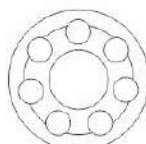
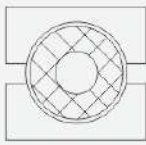
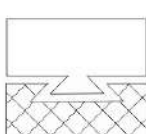
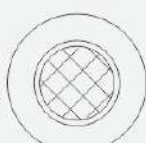
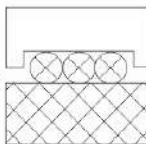
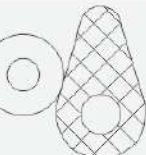
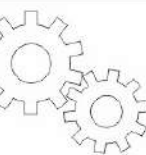

3	∅3
4	∅4
6	∅6

备注: 安装牙纹是公制牙纹时请注明牙距。例如M10X1.0写作1010, M10X1.25写作10125。Remarks: Please indicate the tooth distance when the tooth pattern is metric. For example, M10X1.0 is written as 1010 and M10X1.25 is written as 10125.

润滑给油介绍 Introduction to oil supply for lubrication

润滑需油量之计算 Computation for oil needed for lubrication

单位Unit: (cm)

使用场合Conditions for use	计算公式Computation formula	例题Example
滚珠轴承 Rolling bearing 	需油量F (cc/hr)=0.04 x 轴承直径 x 轴承数 Oil volume needed (cc/hr)=0.04 x bearing diameter x bearing quantity	假设有一滚珠轴承，轴承直径为8，求每小时所需之油量。 F=0.04x8x1=0.32 (cc/hr) Assume that there is one rolling bearing, diameter of the bearing is 8, oil volume needed per hour F=0.04 x 8 x 1=0.32 (cc/hr)
滑动轴承 Sliding bearing 	需油量F(cc/hr)=0.023x轴直径x接触轴长 Oil volume needed F (cc x hr)=0.023 x 8 x diameter of bearing x contact axial length	假设有一滑动轴承，轴直径为8，接触长度为10，求每小时所需之油量。 F=0.023x8x10=1.84 (cc/hr) Assume that there is one sliding bearing, diameter of the bearing is 8, and contact length is 10, and oil volume needed per hour shall be obtained. F=0.023 x 8 x 10=1.84 (cc/hr)
平滑滑动轨道 Flat sliding track 	水平：需油量F(cc/hr)=0.0017x滑块长x滑块宽 垂直：需油量F (cc/hr)=0.06x滑块长x滑块宽 Horizontal: oil volume needed (cc/hr)=0.0017 x length of sliding block x width of sliding block Vertical: oil volume needed F (cc/hr)=0.06 x length of sliding block x width of sliding block	假设有一平滑滑动轴承，垂直放置，滑块长10、宽4，求每小时所需之油量。 F=0.006x10x4=0.24(cc/hr) Assume that there is one flat horizontal sliding bearing, vertically placed, length of the sliding block is 10, width of that is 4, and oil volume needed per hour shall be obtained. F=0.006 x 10 x 4=0.24 (cc/hr)
圆筒滑动轨道 Cylinder sliding track 	需油量F (cc/hr)=0.023x轴直径x轴长 Oil volume needed (cc/hr)=0.023 x shaft diameter x shaft length	假设有一圆滚直通体，垂直为8，长为10，求每小时所需之油量。 F=0.023x8x10=1.84(cc/hr) Assume that there is a rolling through body, 8 for vertical placement, the length is 10, and oil volume needed per hour shall be obtained. F=0.023 x 8 x 10=1.84 (cc/hr)
线性滑轨 Linearity sliding track 	需油量F (cc/hr)=0.012x滑块长x滑块数 Oil volume needed (cc/hr)=0.012 x length of sliding block x quantity of sliding block	假设有一线性滑轨，滑块长8，滑块数量，求每小时所需之油量。 F=0.012x8x2=0.19(cc/hr) Assume that there is one linearity sliding track, length of the sliding block is 8, width of the sliding block is 2, and oil volume needed per hour shall be obtained. F=0.012 x 8 x 2=0.19 (cc/hr)
凸轮 Cam 	需油量F (cc/hr)=0.013x圆周长x宽 oil volume needed F (cc/hr)=0.013 x circumference x width	假设有一线凸轮机构，凸轮圆周长为20，宽2，求每小时所需之油量。 F=0.013x20x2=0.52(cc/hr) Assume that there is one linear cam unit, the cam circumference is 20, width is 2, and oil volume needed per hour shall be obtained. F=0.013 x 20 x 2=0.52 (cc/hr).
齿轮 Gear 	需油量F (cc/hr)=0.046x节圆直径x齿宽 oil volume needed F (cc/hr)=0.046 x pitch diameter x tooth width	假设有一正齿轮，节圆直径为8，齿宽2，求每小时所需油量。 F=0.046x8x2=0.74(cc/hr) Assume that there is a spur gear, pitch diameter is 8, tooth width is 2, and oil volume needed per hour shall be obtained. F=0.046 x 8 x 2=0.74 (cc/hr)
链条 Chain 	需油量F (cc/hr)=0.008x链长x宽度 oil volume needed (cc/hr)=0.008 x chain length x width	假设有一链条总长30，链宽0.8，求每小时所需之油量。 F=0.008x30x0.8=0.19(cc/hr) Assume that there is one chain with total length of 30, width of the chain is 0.8, and oil volume needed per hour shall be obtained. F=0.008 x 30 x 0.8=0.19 (cc/hr)

润滑系统螺纹及单位对照(lubrication system screws and unit reference): ●S:G、RP ●PT:ZG、R、RC ●NPT
压力: 1MPa=10kgf/cm² 油品黏度: 1cSt=1mm²/s Pressure: 1MPa=10kgf/cm Oil viscosity: 1cSt=1mm²/s

油品黏度与温度关系表 Relations of viscosity and temperature of oil products

润滑油黏度-温度对应表 Matching plan of viscosity-temperature of lubricant

单位Unit:cSt

温度℃	N32	N68	N100	N150	N220	N380	N460
0	265	880	1500	2700	4200	9000	13000
1	245	785	1390	2300			
2	226	715	1280	2100			
3	210	650	1170	1930			
4	195	590	1060	1780			
5	182	540	950	1650			
6	170	495	890	1520			
7	160	465	830	1400			
8	150	440	770	1300	2000		
9	142	410	710	1200	1800		
10	135	380	650	1100	1650		
11	127	350	604	1000	1500		
12	121	330	558	900	1400		
13	116	315	512	850	1300	3500	4500
14	108	290	466	800	1200		
15	102	270	420	750	1000		
16	98	250	400	700	950		
17	92	240	375	650	900	2000	2500
18	87	230	355	600	850	1800	2300
19	83	210	330	560	800	1600	2100
20	80	200	310	520	750	1500	1900
21	75	190	290	480	700	1350	1750
22	70	180	275	460	650	1250	1600
23	67	170	255	440	600	1150	1500
24	65	160	240	420	560	1050	1400
25	62	152	220	380	520	950	1300
26	58	144	210	360	490	900	1200
27	55	127	200	320	460	850	1100
28	52	120	190	300	430	800	1000
29	50	115	180	280	405	750	920
30	48	110	170	265	380	700	850
31	46	105	160	250	360	650	800
32	44	100	155	235	340	610	750
33	42	95	145	225	320	580	700
34	40	90	140	215	300	520	650
35	38	85	130	200	280	550	610
36	36	81	125	190	260	490	580
37	35	77	120	180	245	460	550
38	34	74	110	170	235	430	520
39	33	71	105	160	227	405	490
40	32	68	100	150	220	380	460
41	31	65	95	142	213	355	430
42	30	62	90	135	206	330	400
43	29	60	85	128	200	316	375

稀油润滑，请使用注油机上推荐的油剂粘度范围值，建议用户根据季节温差变化，选择近似粘度值的油剂使用，以达到更好的润滑效果。
Thin oil lubrication, oil reagent viscosity scope used by oil injector. Users are recommended to select the oil with similar viscosity subject to change of temperature to achieve better lubrication effects.

容积式集中稀油润滑系统 Volumetric centralized thin oil lubrication system

P.03 BTA-A2P3 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.04 BTA-A2P4 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.05 BTA-C2P3 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.06 BTA-C2P4 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.07 BTB-A2P3 数显稀油润滑泵 Thin oil lubrication pump with digital display
P.09 BTB-C2P3 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.11 BTD-A2P3 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.13 BTD-C2P3 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.15 BTD-O2P3 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.17 BTF-A2 数显稀油润滑泵 Thin oil lubrication pump with digital display
P.18 BTF-C2 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.19 BFA-07 定量减压稀油分配器 Quantified decompression thin oil distributor	P.21 BFD/BFE-00-5 单支加压式稀油分配器 Single pressurized thin oil distributor	P.21 BFD-05 定量加压式稀油分配器 Quantified pressurized thin oil distributor	P.23 BFG/BFH-05 整体加压式稀油分配器 Integral pressurized thin oil distributor

抵抗式集中稀油润滑系统 Resistance-type centralized lubrication system

P.29 BTA-A12 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.30 BTA-A14 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.31 BTA-C13 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.32 BTA-C16 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.33 BTF-A1 数显稀油润滑泵 Thin oil lubrication pump with digital display
P.34 BTF-C1 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.35 BTB-A13 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.36 BTB-A14 数显稀油润滑泵 Thin oil lubrication pump with digital display	P.37 BTB-C14 PLC控制稀油润滑泵 PLC control thin oil lubrication pump	P.39 BEA-615-262 自动活塞式润滑泵 Automatic piston lubrication pump
P.40 BEB 手拉式润滑泵 Hand-pull lubrication pump	P.40 BEC 手压式润滑泵 Hand-operated lubrication pump	P.41 BED 手压式润滑泵 Hand-compression lubrication pump	P.43 BSB BSA BSC 稀油比例接头 Thin oil proportional joint	P.42 BSD 稀油抵抗式分配器 Thin oil resistance-type dispenser assembly

容积式集中油脂润滑系统 Volumetric centralized grease lubrication system

P.47 GTB-A2P3 数显油脂润滑泵 Digital Grease lubrication pumps	P.48 GTB-C2P3 PLC油脂润滑泵 PLC grease lubrication pump	P.49 GTC-C2P2 PLC油脂润滑泵 PLC grease lubrication pump	P.50 GEN-2 电动油脂润滑泵 Electric grease lubrication pump	P.51 GEO-2 电动油脂润滑泵 Electric grease lubrication pump
P.52 GED-2 气动油脂润滑泵 Pneumatic grease lubrication pump	P.56 ALA/ALB 罐装油脂 grease cartridge	P.57 GFA-07 定量减压式油脂分配器 Quantified decompression oil grease distributor	P.59 GFD/GFE-00-5 单支加压式油脂分配器 Single pressurized grease distributor	P.59 GFD-05 定量加压式油脂分配器 Quantified pressurized oil grease distributor

递进式集中油脂润滑系统 Progressive centralized grease lubrication system

P.66 GTB-C1P3 PLC油脂润滑泵 PLC grease lubrication pump	P.72 GEP-1 电动油脂润滑泵 Electric grease lubrication pump	P.74 GET 高压润滑泵 High pressure lubrication pump	P.76/77 GPA/GPB 油脂分配器 Progressive grease distributor	P.81/82 GPC/GPE 油脂分配器 Progressive grease distributor
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油气润滑系统/微量油雾润滑系统 Oil-air lubrication system / MQL lubrication system

P.84 ETC 油气润滑系统 Oil-air lubrication system	P.87 BEL 气动稀油润滑泵 Pneumatic thin oil lubrication pump	P.89 EFA 油气混合器 Oil and gas mixer	P.92 EVO 主轴油雾润滑泵 Spindle oil mist lubrication pump	P.93 EVB-A 微量油雾润滑泵 MQL lubrication unit
P.95 EVP 加压式喷雾系统 Pressurized spray system	P.96 ESA 双列分块 Dual Row Distribution	P.97/98 EVA/EVJ 冷却喷雾器 Cooling sprayer	P.99 EVQ 微量(外冷)喷雾冷却系统 Micro (externally cooled) spray cooling system	P.101 EVI 内冷MQL喷雾泵 Internal cooling MQL spray pump

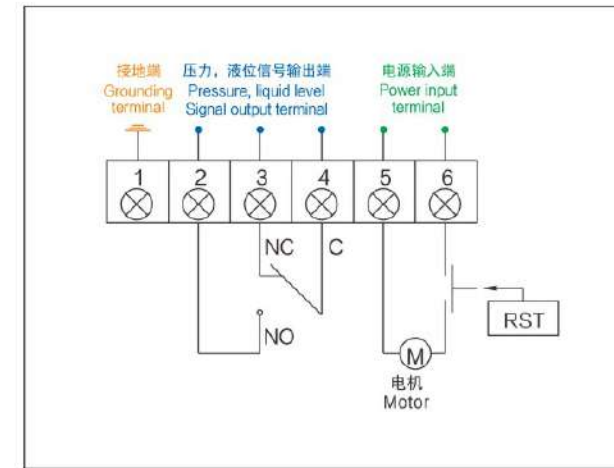
机床油泵 Oil pump

P.104 AFF 自动过滤器 Automatic oil filter	P.104 MTH-TOP 给油泵 Oil supply pump	P.106 MTM 铁壳直连马达 Iron shell direct link motor	P.108 重油马达 Heavy oil motor	P.111 HLC 润滑泵站 lubrication pump station
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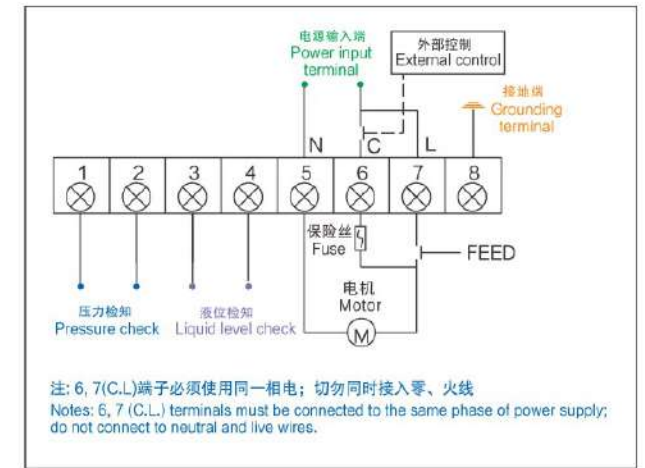
集中润滑系统配件 Accessories of lubrication system

P.112 CAB/CAC连接体 CAB/CAC manifold	P.113 BSE/BSF可调型连接体 BSE/BSF adjustable distributor	P.114 CZA连接体 CZA manifold	P.114 固定双接头 Fixed varying joints	P.114 三通管 Tee	P.114 四通管 Four-way connector	P.114 ED堵头 ED plug
P.115 套管 Double tapered sleeve	P.115 套管帽 Socket union	P.116 螺帽 Screw cap	P.114 套管塞头 Sleeve plug	P.115 直接头 Straight joint	P.115 直角接头 Elbow fitting	P.117 平面直角接头 Short elbow fitting
P.117 活动直接头 Short elbow fitting	P.117 铜快速直接头 Quick copper through types	P.117 万向接头 Banjo fitting	P.115 内、外牙双接头 Inner and outer thread dual joint	P.116 过度三通 Transitional tee	P.116 快插式直接头 Push-in straight head	P.116 快插式直角接头 Push-in right-angle connector
P.124 滤油网 Suction screen	P.125 加油口 filling strainer	P.118 卡套式直接头 Cutting ring straight fitting	P.118 卡套式直角接头 Cutting ring elbow fitting	P.118 卡套式三通接头 Cutting ring Tee fitting	P.118 卡套式双通接头 Cutting ring straight connector	P.119 TUB高压软管接头 High pressure hose elbow and stud
P.119 管夹 tube clamp	P.118 油气快插接头 Oil and gas quick release couplings	P.120 尼龙管 Nylon tube	P.120 高压管 High pressure hose	P.120 铝管 Aluminum tube	P.120 镀铜铝管 Copper-coating aluminum tube	P.120 铜管 Copper tube
P.124 过滤器 Filter	P.124 油脂过滤器 Grease filter	P.125 ASF 压力开关 Pressure switch	P.127 润滑毛毡齿轮 Lubrication pinion	P.128 针阀式注油杯 Needle valve oil injection cup	P.128 弹簧盖式直油杯 Spring cap straight-oil cup	P.128 黄油嘴 Grease nipples
P.128 直喷式高压万向喷嘴 straight High pressure universal nozzle	P.128 斜喷式高压万向喷嘴 oblique High pressure universal nozzle	P.128 弯管式直喷高压万向喷嘴 bend High pressure universal nozzle	P.75 手动加油枪 Manual oiling sprayer	P.120 不锈钢管 Stainless steel tube	P.119 钢丝护套 Steel wire protection sleeve	P.120 高压软管 High-pressure flexible hose
				P.121 高压软管 High-pressure flexible hose	P.121 钢丝护套软管 Steel wire sleeve flexible hose	P.122 外钢丝软管 Steel-wire flexible hose
				P.122 扣压式高压软管 Compression type high-pressure hose		

电路接线图 Circuit wiring diagram

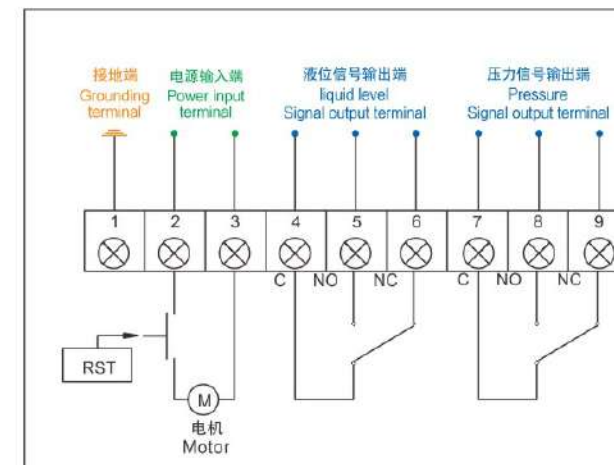


A、B型 Type
(BTA-A2,BTB-A2, BTD-A2, GTB-A2, BTA-A1, BTB-A1, GTB-A1)
(BTA-B2, BTA-B1, BTB-B1)

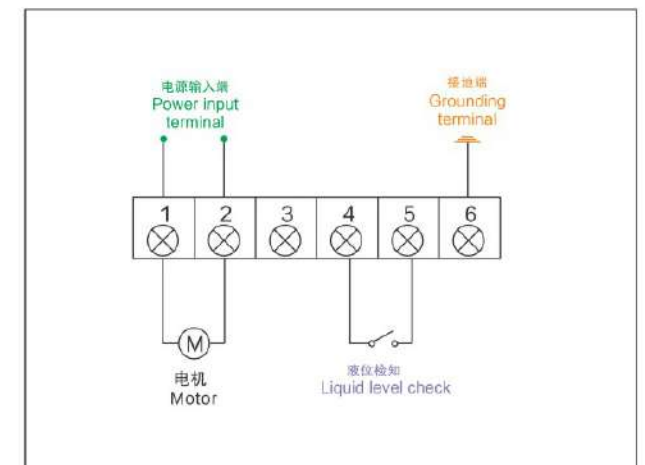


C型 Type
(BTA-C2, BTB-C2, BTD-C2, BTA-C1, BTB-C1)

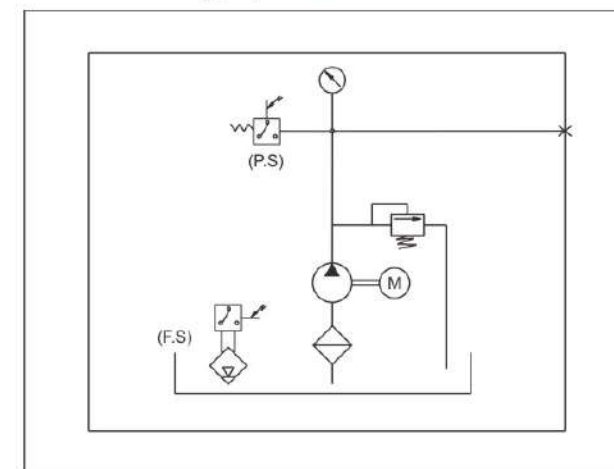
注: 6, 7(C.L)端子必须使用同一相电; 切勿同时接入零、火线
Notes: 6, 7 (C.L) terminals must be connected to the same phase of power supply; do not connect to neutral and live wires.



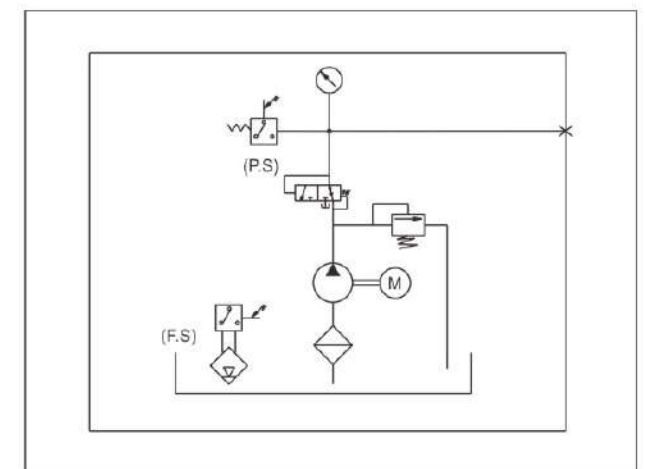
A型 压力控制模式
AType pressure control mode



BEA 型 Type



抵抗式工作原理图
Resistance-type Schematic diagram



容积式工作原理图
Volumetric centralized Schematic diagram