

OIL FILTRATION
EQUIPMENT



 凡净过滤®
ALL NET FILTER

油品过滤设备

OIL FILTRATION EQUIPMENT



凡天下油品 净化至本源
PURIFY ALL OILS TO THEIR PRISTINE STATE

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企业简介

Company Profile

泸州凡净过滤设备制造有限公司，是一家集研发、生产、销售为一体的综合性现代化科技型企业，坐落于中国泸州。自建核心元件制造车间设备制造车间拥有完整的研发、设计、生产能力。

Luzhou FANJING Filtration Equipment Manufacturing Co., Ltd. is a comprehensive, modern, technology-driven enterprise integrating R&D, production, and sales, located in Luzhou, China. We boast complete capabilities in R&D, design, and production with our own core component manufacturing workshop.

公司主要生产销售工业油品过滤设备、工业废油提炼设备、工程机械液压油旁路过滤器。研发团队经过多年苦心专研，不断与国内多个科研单位及知名院校交流合作，突破行业壁垒，推动行业不断前行。拥有独立自主知识产权、十余项国家专利通过ISO9001质量体系认证，GB/T45001管理体系认证、GB/T24001环境管理体系认证，公司先后荣获国家级科技型中小企业，创新型中小企业。公司产品设备服务已覆盖国内300多个县市，出口海外十多个国家和地区。已然成为当今国内油品过滤行业引领者。

The company mainly produces and sells industrial oil filtration equipment, industrial waste oil refining equipment, and hydraulic oil bypass filters for construction machinery. After years of intensive R&D and close cooperation with domestic research institutes and renowned universities, our R&D team has broken industry barriers and driven industry development. We own independent intellectual property rights and more than ten national patents. We have passed ISO9001 Quality Management System, GB/T45001 Occupational Health and Safety Management System, and GB/T24001 Environmental Management System certifications. The company has been awarded the titles of National High-tech SME and Innovative SME. Our products and services cover more than 300 cities in China and are exported to over ten countries and regions, positioning us as a leading enterprise in China's oil filtration industry.

公司以科技为指导、质量求生存、奉行工匠精神作为发展理念。员工奉行“进取、务实、严谨、诚信”。不断开拓创新为方针。公司现有多个系列产品“凡净过滤”系列设备广泛应用于工厂生产制造机械，工程机械，大型炼油厂、水利、电力、港口等诸多领域。“拦精灵”系列产品主要应用于工程机械、制造业机械等领域。节能降耗，减污增效，保护环境，利国利民。

Guided by technology, sustained by quality, and driven by craftsmanship — this is our development philosophy. Continuous innovation is our guiding principle. Our staff upholds the spirit of enterprise, pragmatism, rigor, and integrity. The company currently offers multiple product lines, including the “Fan Jing Filtration” series of equipment, which is widely used in various fields such as factory manufacturing machinery, construction machinery, large-scale oil refineries, water conservancy, power generation, and ports. The “LANJINGLING” Filter series is mainly applied in construction machinery and manufacturing machinery sectors. It helps conserve energy, reduce consumption, minimize pollution, and improve efficiency—contributing to both the environment and society.

服务理念

Service Philosophy

随着行业的发展，各类机械设备越来越智能、高端精密。因此对润滑油洁净度的要求越来越高，在日常生产运行中，经常遇见机械设备因油品受到污染而导致零部件加速磨损，甚至损坏。造成高昂的维修费用，用油成本，停工停产。

With industrial development, mechanical equipment is becoming increasingly intelligent, sophisticated, and precision-engineered. Consequently, requirements for lubricating oil cleanliness keep rising. During routine production operations, it is common for mechanical equipment to experience accelerated wear—or even damage—to components due to contaminated lubricants. This results in high repair costs, higher oil costs, and production downtime.

长期以来，因油品污染导致的系列问题都没有得到有效解决。直到高精密油品过滤设备的出现，这一现状才得到改善。

Such long-standing problems caused by oil contamination had not been effectively solved until the emergence of high-precision oil filtration equipment.

凡净油品过滤设备，以净化脏油，废油再生利用为己任。凡天下油品，净化致本源。我们致力于解决因油品污染导致的问题而生。

FANJING oil filtration equipment was born to solve oil contamination problems — by cleaning dirty oil and recycling waste oil, restoring it to its purest form.

降低机械用油成本

Reduce mechanical oil costs

减少机械故障概率

Minimize the likelihood of equipment failures

废油再生利用

Recycle used oil

打造绿色，健康的机械用油链条

Build a sustainable and environmentally friendly lubricant supply chain

服务至上，我芯永恒。

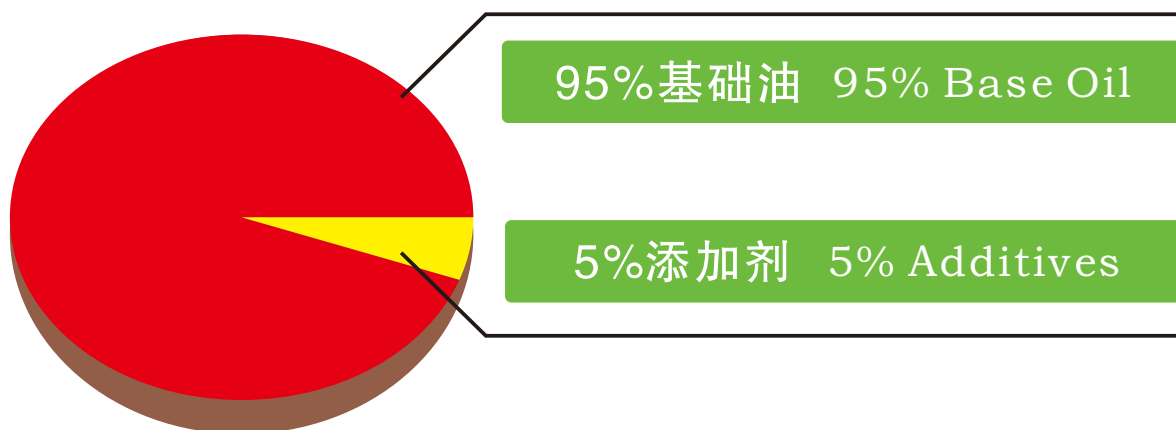
工业油品的组成

Composition of Industrial Oils

液压油是一种重要的工业用油，主要由基础油和添加剂两部分组成。
Hydraulic oil is a key industrial oil, mainly composed of base oil and additives.

基础油，是液压油的主要成分，通常占95%以上，常用的基础油包括矿物油、合成油或半合成油，矿物油主要来源于石油，具有良好的润滑性能和稳定性，而合成油和半合成油则是通过化学合成或加工改性获得，具有更高的性能和稳定性。

Base oil is the main component of hydraulic oil, typically accounting for over 95%. Common base oils include mineral oil, synthetic oil, or semi-synthetic oil. Mineral oil is derived from petroleum and features good lubricity and stability, while synthetic and semi-synthetic oils are produced through chemical synthesis or modification, providing higher performance and stability.



Additives are used to enhance the performance of hydraulic oil, extend its service life, and ensure the proper operation of hydraulic systems. Common types of additives include antioxidants, anti-wear agents, detergents, anti-foaming agents, and corrosion inhibitors. These additives help improve the hydraulic oil's resistance to wear, oxidation, and contamination, as well as other related properties.

添加剂，用于提高液压油的性能，延长其使用寿命，并保护液压系统的正常运行，常见的添加剂类型包括抗氧化剂、抗磨剂、清洁剂、抗泡剂、抗腐蚀剂等，这些添加剂有助于增强液压油的抗磨损、抗氧化、清洁和其他相关性。

此外，液压油的分类方式多样，包括按用途、化学组分、可燃性等分类，不同种类的液压油适用于不同的工作环境和温度范围。

In addition, hydraulic oils are classified in various ways, including by application, chemical composition, and flammability. Different types of hydraulic oils are suitable for different operating environments and temperature ranges.

液压油过滤的必要性

Necessity of Hydraulic Oil Filtration

液压油过滤的必要性主要包括以下几点：

The necessity of hydraulic oil filtration mainly includes the following points:

去除杂质

Removal of
Contaminants

液压油中可能存在的金属屑、灰尘、油泥等杂质会对液压系统的正常运行产生不利影响，如增加摩擦、堵塞油路、损坏密封件等。通过过滤，可以有效去除这些杂质，保持系统的正常运行。保护液压元件：液压系统中的泵、阀门、缸体等元件对液压油的洁净度有较高要求。杂质的存在会加剧这些元件的磨损，缩短其寿命，降低性能。过滤液压油可以保护这些元件，延长其使用寿命。

Contaminants such as metal shavings, dust, and sludge that may be present in hydraulic oil can adversely affect the normal operation of the hydraulic system—for example, by increasing friction, blocking oil passages, and damaging seals. Filtration effectively removes these contaminants, helping to maintain normal system operation. Protecting hydraulic components: Components such as pumps, valves, and cylinders in hydraulic systems require a high level of oil cleanliness. Contaminants accelerate wear on these components, shorten their service life, and reduces performance. Filtering the hydraulic oil protects these components and extends their operational life.

提高系统效率

Improve System
Efficiency

液压油的洁净度影响系统的工作效率。杂质增加油液黏度，导致能耗增加，效率降低。过滤液压油可以降低油液黏度，提高系统效率。

The cleanliness of hydraulic oil affects system efficiency. Contaminants increase oil viscosity, raising energy consumption and reducing efficiency. Filtering hydraulic oil lowers viscosity and improves system efficiency.

预防故障 和维修成本

Prevent Failures &
Reduce
Maintenance
Costs

定期过滤液压油可以预防系统的故障和损坏，减少维修成本和停机时间。

Regular filtration of hydraulic oil can prevent system failures and damage, reducing maintenance costs and downtime.

防止氧化 和腐蚀

Prevent Oxidation
& Corrosion

长时间使用的液压油会受到氧化和腐蚀的影响，导致性能降低和金属部件损坏。过滤可以去除这些有害物质，延缓液压油的老化和腐蚀过程。

Hydraulic oil used over long periods is susceptible to oxidation and corrosion. Filtration removes these harmful substances, delaying the aging and corrosion process of the hydraulic oil.

提高液压系统的可靠性

Enhance System Reliability

过滤液压油能有效去除磨粒和沉淀物，避免堵塞油路和阀门，提高系统的可靠性和稳定性。

Filtering hydraulic oil effectively removes abrasive particles and sediments, preventing blockages in oil circuits and valves, thereby improving system reliability and stability.

提高液压系统的精度

Improve System Precision

对于需要高精度运行的设备，如数控机床、机器人等，液压油的杂质会影响运行精度和位置控制。过滤液压油可以提高系统的精度。

For equipment requiring high precision, such as CNC machines and robots, contaminants in hydraulic oil impair accuracy and position control. Filtering hydraulic oil enhances system precision.

保持液压油的品质

Maintain the Quality of Hydraulic Oil

液压油在机械运转中起到能量传递、转换和控制的作用，其品质的破坏会对机器运转产生极大影响。通过过滤，可以保持液压油的良好润滑、防锈、冷却、减震等作用。

Hydraulic oil transmits, converts, and controls energy during operation. Degraded oil quality can severely impact machine performance. Filtration helps maintain its lubricating, anti-rust, cooling, and damping functions.

过滤前
before
filtering



过滤后
filtered

综上所述，液压油过滤对于保持液压系统的正常运行、延长元件寿命、提高效率、预防故障、防止氧化和腐蚀、提高可靠性、保持精度以及维持液压油品质等方面都具有重要的必要性。

In summary, hydraulic oil filtration is essential for stable system operation, extended component life, higher efficiency, failure prevention, anti-oxidation, better reliability, precision and consistent hydraulic oil quality.

油品过滤的意义

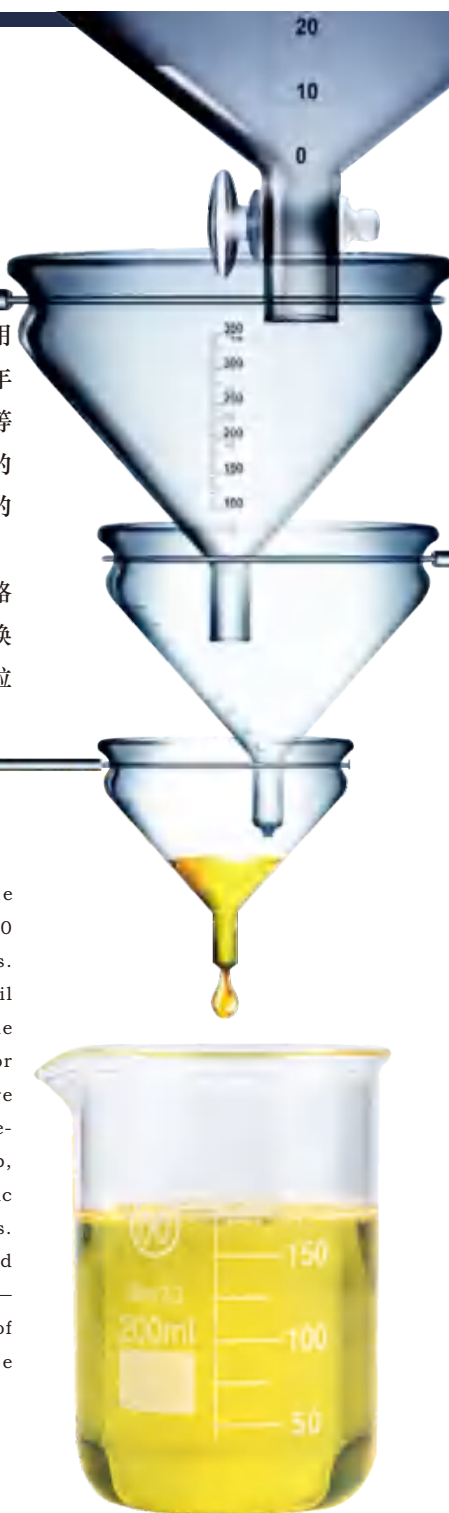
Significance of Oil Filtration

液压油的使用寿命：液压油的使用寿命为4000-6000小时，大约为两年左右的时间。(具体根据选择的油品等级而定),正常情况下，液压油箱所装的液压油是整机液压系统全部用油的2/3,余下的1/3液压油存储在液压泵、马达、多路阀、液压油缸和各部的管路中。在更换新油时无法做到彻底更换的，残留的旧油里掺杂有大量的颗粒物，会继续损坏设备部件。

Service life of hydraulic oil: The service life of hydraulic oil is 4,000 - 6,000 hours, which is approximately two years. (This depends on the specific grade of oil selected.) Under normal conditions, the hydraulic oil in the reservoir accounts for two-thirds of the total oil used in the entire hydraulic system, while the remaining one-third is stored in the hydraulic pump, motor, directional control valve, hydraulic cylinder, and various piping components. If the old oil cannot be completely drained during an oil change, the residual oil — which still contains a significant amount of particulate matter — will continue to cause damage to equipment components.

油品在使用过程中最常见的问题就是油品进水、机械杂质颗粒、破碎带入的灰尘和金属杂质等会导致油品清洁度超标NAS12级以上。这种污染油品如果继续使用，极易导致设备故障、卡阀堵阀、运行噪声变大、设备运行不稳定抖动和加速磨损设备部件，大幅缩短设备的使用寿命等问题。因此，需要及时进行过过滤净化处理。经过专业设备净化过的油品可以继续使用。油品净化后重复使用，既能节省用油成本，也能减少油品报废对环境污染的破坏和减少设备的维修成本!

The most common issues during oil use — such as water ingress, mechanical particles, dust, and metal contaminants — can cause oil cleanliness to exceed NAS Grade 12. If such contaminated oil continues to be used, it can easily lead to problems such as equipment failures, valve sticking or clogging, increased operational noise, unstable operation with vibration, and accelerated wear of equipment components, significantly shortening the equipment's service life. Therefore, timely filtration and purification are essential. Oil that has been purified using professional equipment can be reused. Reusing purified oil helps reduce oil costs, minimize environmental pollution from waste oil, and lower equipment maintenance expenses!



油品过滤后 是否可以继续使用

Reusability of Filtered Oil

液压油过滤后在一定条件下是可以重复使用的。过滤可以去除液压油中的固体颗粒、水分和氧化产物等污染物，恢复其清洁度和性能。

Under certain conditions, filtered hydraulic oil can be reused. The filtration process removes contaminants from the hydraulic oil, such as solid particles, water, and oxidation byproducts, thereby restoring its cleanliness and performance.

是否适合重复使用还取决于多个因素：

Whether it is suitable for reuse depends on several factors:

净化程度 Degree of Purification

液压油经过的净化处理越彻底，其重复使用效果通常越好。例如，某些专业的液压油净化服务可以达到很高的清洁度等级，满足甚至超过新油的标准。

The more thoroughly the hydraulic oil is purified, the better it performs when reused. For example, certain specialized hydraulic oil purification services can achieve very high cleanliness levels, meeting or even exceeding the standards for new oil.

使用环境和 设备要求 Operating Environment and Equipment Requirements

不同的液压系统对液压油的性能指标有不同的要求。一些精密的液压系统可能对液压油的清洁度和其他性能指标有更高的要求。因此，在决定是否重复使用前，需要评估液压油是否能满足特定系统的需求。

Different hydraulic systems have varying requirements for hydraulic oil performance. Some precision hydraulic systems may have stricter requirements for oil cleanliness and other key indicators. Therefore, before deciding whether to reuse hydraulic oil, it is necessary to assess whether it meets the specific requirements of the system.

油品老化或 化学添加剂 损失情况

Deterioration of
Hydraulic
Oil or Loss of
Chemical
Additives

如果液压油因为长时间使用而老化，或者其中的化学添加剂已经损失导致油品发黑，虽然可以通过物理净化过滤去除部分杂质，但无法完全恢复其原始性能和颜色。在这种情况下，可能需要考虑更换新的液压油而不是重复使用旧油。

If hydraulic oil has deteriorated due to prolonged use, or if the chemical additives have been depleted, causing the oil to turn black, physical filtration can remove some contaminants but cannot fully restore its original performance and color. In such cases, it may be better to replace the hydraulic oil with new rather than reuse the old.

总的来说，虽然液压油在经过适当处理后可以重复使用，但为了确保液压系统的正常运行和可靠性，建议定期更换液压油并严格按照设备制造商的建议和规范选择和使用液压油。此外，对于是否可以重复使用以及具体的处理方法还需要根据实际情况进行评估和决策。

In general, hydraulic oil may be reused after proper treatment. However, for reliable system operation, regular replacement is recommended, and the oil must be selected and used in strict compliance with the manufacturer's specifications. Additionally, decisions regarding oil reuse and the appropriate treatment methods should be made based on site-specific conditions.

油品污染的危害

Hazards of Oil Contamination

液压系统中的各种阀体都是制造精度极高的配件，配合间隙很小。液压系统工作时，液压油中的固体颗粒会随着油液的流动进入摩擦副表面，加剧液压阀的磨损，导致泄漏量增加，压力下降。

The various valve bodies in a hydraulic system are components manufactured to extremely high precision, with very small clearance tolerances. When the hydraulic system is in operation, solid particles in the hydraulic fluid are carried by the flow onto the surfaces of the friction pairs, accelerating wear on the hydraulic valves, which leads to increased leakage and a drop in pressure.

1

2

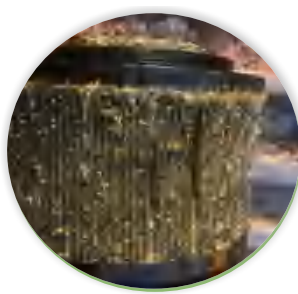
空气的侵入会使体弹性模量降低液压油，使系统的响应性和刚性降低，系统更容易发生振动。

Air ingress reduces the elastic modulus of the hydraulic oil, diminishing the system's responsiveness and rigidity and making it more prone to vibration.

水悬浮气泡会明显削弱运动副间的油膜强度，降低液压油的润滑性，加速液压元件的损坏。

Water-entrained air bubbles significantly weaken the oil film strength between moving parts, reduce the lubricity of the hydraulic oil, and accelerate the wear of hydraulic components.

3



油品污染源

Sources of Oil Contamination

造成固体颗粒污染的原因

Causes of Solid Particle Contamination

设备在运行时部件所产生的铁屑铜粉和老化密封件脱落的杂质。

Water-Iron filings and copper dust generated by equipment components during operation, and particulate impurities shed from deteriorated seals

液压系统本身原有残留杂质，如制造装配过程中产生的，又未得到彻底清除。

Residual impurities from manufacturing and assembly that were not fully removed.

新油中含有杂质，因为油液流经的油管和储存油液的油桶含有杂质。

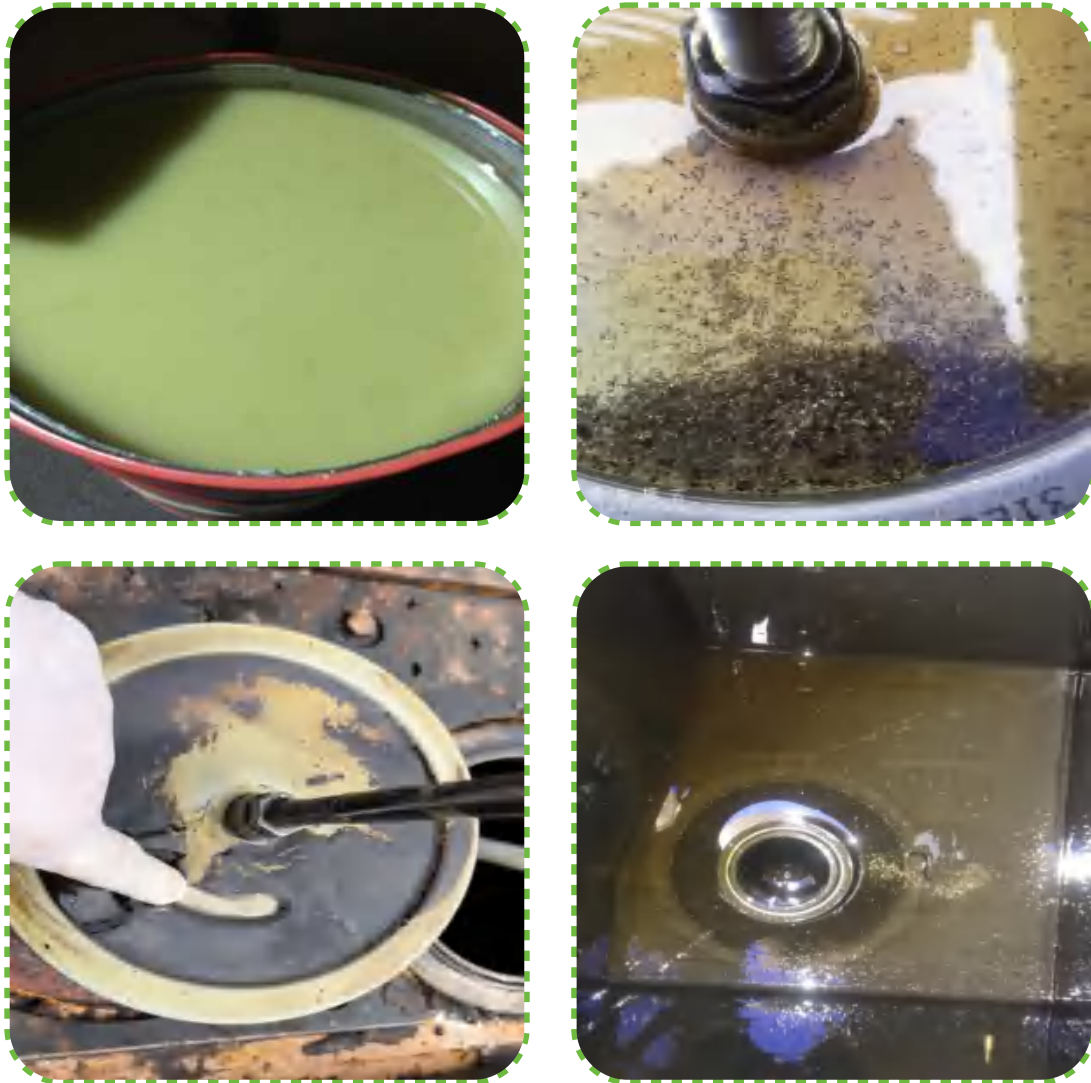
Particulate impurities found in new oil from contaminated pipelines and storage barrels.

野外露天作业环境恶劣，各种飞扬的物质颗粒浸入液压系统。

Harsh outdoor working conditions allow various airborne particles to enter the hydraulic system.

液压系统维护时拆装元件和管路等过程中造成污染物的侵入，或加油、换油时使用了不洁的过滤容器带进的污染物等。

Contaminants may enter the system during maintenance operations, such as when disassembling or reassembling components and piping, or when refilling or changing oil using unclean filtration containers.



液压系统及元件在加工、装配、储运中将污物混入系统中；使用中漏气或漏水后形成不溶物；使用中金属零部件磨损后产生的磨屑；空气中灰尘的混入等，这些都易形成液压油中的颗粒污物。液压油中混入颗粒污物，容易形成部件磨损，降低液压油的润滑性能，冷却性能。

Contaminants can enter the system during the manufacturing, assembly, storage, and transportation of hydraulic systems and components; insoluble substances can form due to air or water leaks during operation; metal particles generated by the wear of components during operation; and dust from the air—all of these can easily result in particulate contamination in the hydraulic oil. The presence of particulate contaminants in hydraulic oil can lead to component wear and reduce the oil's lubricating and cooling properties. Appropriate treatment methods should be made based on site-specific conditions.

设备功能

Equipment Functions

凡净过滤设备是国内同时拥有双过滤系统、清洗系统、加热系统、智控、气泵系统、可视观测等多功能的油品过滤设备。

FANJING filtration equipment is a multifunctional oil filtration device in China, including a Dual Filtration System, a cleaning system, a heating system, intelligent control, an air pump system, and a visual monitoring feature.



过滤前
Before
filtration

过滤后
After
filtration



过滤系统

Filtration System

过滤系统采用的UF高分子物理渗透过滤方式，具有脱渣，脱水，脱色，除味等功能特点。

The filtration system employs UF (ultrafiltration) polymer-based physical permeation filtration, offering functions such as debris removal, dehydration, decolorization, and deodorization.

(1)脱渣：凡净过滤设备精度可达 $0.1\mu\text{m}$ ，是目前市面上过滤精度最高的过滤设备，能过滤掉更为细微的有害杂质，过滤后油品的洁净度可达到NAS5-8 级。

(1) Debris Removal: The FANJING filtration equipment achieves a precision of $0.1\mu\text{m}$, making it the highest-precision filtration equipment currently available on the market. It can filter out even the finest harmful particulate impurities, resulting in oil purity levels of NAS 5-8 after filtration.

(2)脱水：设备滤芯具有吸收水分的功能，因进水被污染乳化的油品经过滤后可达到油水分离的目的，还原油品本身品质。

(2)Dehydration: Filter elements absorb water, separating water from emulsified oil and restoring original oil quality.

(3)脱色：设备具备脱色效果，油品因高温氧化，粉尘混入等导致变黄，变红，变黑的，经过设备过滤、吸附后可还原其原本颜色。

(3)Decolorization: The system effectively removes discoloration. Oil that has turned yellow, red, or black due to high-temperature oxidation or dust contamination can be restored to its original color through filtration and adsorption.

(4)除味：使用过的油品往往伴有烧焦的刺鼻味道，经过设备过滤后可以吸附掉这样的异常味道，达到与新油一样的效果。

(4) Odor Removal: Used oil often has a pungent, burnt odor. After passing through the filtration system, these unpleasant odors are removed, restoring the oil to a condition comparable to that of new oil.

(5)过滤系统采用的物理渗透过滤方式，不改变油品本身任何成分，油品添加剂，元素等是不会因过滤受到破坏的。

(5) The filtration system employs a physical permeation filtration method that does not alter any of the oil's original components; additives and other elements in the oil remain unaffected by the filtration process.



设备功能

Equipment Functions

真空负压清洗系统

Vacuum Negative Pressure Cleaning System

设备具有独立清洗系统，利用真空原理，在低于大气压的条件下，对废油收集器内部形成较大的压强差，压强差产生的强大吸力对机械内部杂质，油泥等能快速有效且彻底的吸出。

The equipment has an independent cleaning system that utilizes vacuum principles. Under sub-atmospheric pressure conditions, a significant pressure differential is created inside the waste oil collector. The strong suction force generated by this pressure differential quickly, effectively, and thoroughly removes internal impurities, sludge, and other contaminants from the machinery.



油泥、金属杂质
Sludge, Metal contaminants



清洗彻底
Thorough cleaning



降低劳动强度
Reduced labor intensity



提高工作效率
Improved work efficiency

机械液压油箱清洗的必要性

The necessity of cleaning mechanical hydraulic oil tanks

保持系统清洁 Maintain System Cleanliness

定期更换液压油和滤芯，确保液压油的清洁度和添加剂的有效性。定期排放油箱中的水和沉淀物，清除油中杂质，确保系统清洁。清洗液压油箱，特别是在液压油受到污染或泵、油缸、马达 受损时，必须更换过滤全部液压油并彻底清洗油箱。

Regularly replace hydraulic oil and filters to ensure oil cleanliness and additive effectiveness. Regularly drain water and sediment from the tank to remove contaminants and ensure system cleanliness. Clean the hydraulic tank, especially when the hydraulic oil is contaminated or pumps, cylinders, or motors are damaged; it is necessary to replace and filter all hydraulic oil and thoroughly clean the tank.

防止系统堵塞和磨损 Prevent System Blockage and Wear

清洗可以有效去除沉淀物和油泥，防止油路系统堵塞，保证油路流畅。消除异味和污染物，减少对人体健康的危害，并确保车辆内部空气清新。清洗可以延长燃油泵和喷嘴等关键零部件的使用寿命，减少维修成本。

Cleaning effectively removes sediment and sludge, preventing clogs in the hydraulic circuit and ensuring smooth oil flow. It eliminates odors and contaminants, reducing health risks and ensuring fresh air inside the vehicle. Cleaning also extends the service life of critical components such as the hydraulic pump and valves, thereby reducing maintenance costs.

提高效率 and 安全性 Improve Efficiency and Safety

清洗油路里的沉积物，恢复正常喷油量，消除怠速不稳、加速不良等故障，提高油品经济性。过滤液压油可以有效去除其中的杂质和污染物，降低机器的磨损和液压系统的故障率。

Cleaning deposits from the hydraulic circuit restores normal hydraulic flow, eliminates issues such as unstable operation and poor response, and improves oil efficiency. Filtering hydraulic oil effectively removes particulate impurities and contaminants, reducing machine wear and the failure rate of the hydraulic system.

综上所述，挖机液压油箱清洗对于保持系统的清洁、防止系统堵塞和磨损、提高效率 and 安全性都是非常必要的。

In general, cleaning hydraulic oil tanks is essential for system cleanliness, anti clogging, wear protection, higher efficiency and safety.

设备功能

Equipment Functions

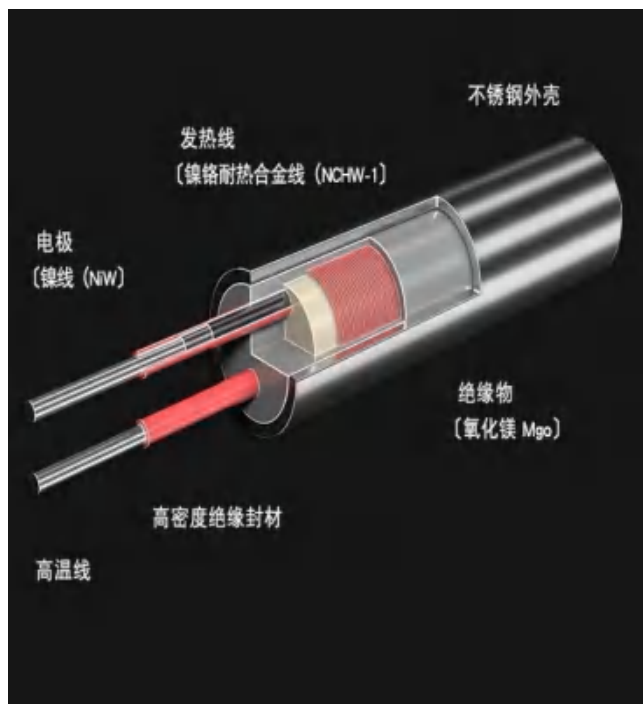
加热系统 Heating System

提高过滤效率：加热液压油可以提高过滤效率，因为加热有助于溶解油中的杂质，使其更容易被过滤材料捕获。这有助于更彻底地清洁液压油，去除金属屑、灰尘、油泥等杂质，从而保护液压系统免受损害。

Improve Filtration Efficiency: Heating hydraulic oil improves filtration by dissolving impurities, making them easier to capture by filter media. This cleans the oil more thoroughly, removing metal chips, dust and sludge to protect hydraulic systems.

防止氧化和腐蚀：加热液压油可以延缓油品的氧化过程，因为氧化通常与高温有关。通过控制油温并定期过滤，可以去除氧化产物和腐蚀物质，延长液压油的使用寿命并保持系统的可靠性。

Prevent Oxidation & Corrosion: Heating hydraulic oil can slow down the oxidation process, as oxidation is typically associated with high temperatures. Controlling oil temperature and filtering regularly remove oxidation byproducts and corrosive substances, extending oil life and maintaining system reliability.



提高系统效率：加热并过滤液压油可以降低油的黏度，减少系统能耗，从而提高液压系统的工作效率。这对于需要高效率运行的设备尤为重要。

Improving System Efficiency: Heating and filtering hydraulic oil reduces its viscosity, lowering system energy consumption and thereby improving the operational efficiency of the hydraulic system. This is particularly important for equipment that requires high-efficiency operation.

预防故障和减少维修成本：通过定期加热和过滤液压油，可以有效预防液压系统的故障和损坏，减少维修成本和停机时间，保持生产的连续性。

Preventing Failures and Reducing Maintenance Costs: Regularly heating and filtering hydraulic oil helps prevent system failures and damage, reducing maintenance costs and ensuring continuous production.

综上所述，液压油加热对过滤的作用不仅限于物理上的水分去除，还包括提高过滤效率、防止氧化和腐蚀、提高系统效率以及预防故障和减少维修成本等多方面的益处。因此，液压油的定期加热和过滤对于维护液压系统的健康和性能至关重要。

In conclusion, heating hydraulic oil for filtration offers multiple benefits: physical dehydration, higher efficiency, antioxidation, better system performance, failure prevention and lower maintenance costs. Therefore, regular heating and filtration are critical to maintaining hydraulic system health and performance.



气 泵 Air Pump

气泵的应用范围

Applications of the Air Pump

1、快速利用气泵排出滤筒及废油收集器内的油液。

1. Quickly drain oil from filter cartridges and waste oil collectors.

2、清除油箱盖上的尘土。

Remove dust from tank covers

3、清洗油箱过程中可利用气泵清除油箱内壁残留的油液，使清洗更干净彻底。

Remove residual oil from tank inner walls during cleaning for a more thorough result.

设备功能

Equipment Functions

粗级过滤系统

Coarse Filtration System

拦截大颗粒杂质：滤除金属屑、焊渣等大颗粒污染物，防止划伤液压元件（如泵、阀）。

Intercept Large Particles: Filters out large particles such as metal shavings and welding slag, preventing damage to hydraulic components (e.g., pumps, valves).

保护精密滤芯：先过滤大颗粒，减轻后续精滤负担，延长精滤芯寿命。

Protect Precision Filters: Filter large particles first to reduce load on fine filters and extend their service life.



可视观测窗

Visual Inspection Window

实时监测过滤状态：通过观察窗，操作人员能直接看到设备内部过滤介质的污染程度、物料的流动情况以及是否有杂质积聚等，便于及时判断过滤效果，确定是否需要更换过滤元件或进行设备维护。

Realtime Monitoring: Operators directly view contamination levels, flow status and particle buildup inside the equipment, enabling timely assessment of filtration performance and filter replacement.

及时发现异常情况：可以及时察觉设备运行中的异常，如是否有泄漏、堵塞、部件损坏等问题，以便迅速采取措施解决，避免故障扩大，减少对生产的影响。

Early Detection of Abnormalities: Enables the timely detection of operational abnormalities, such as leaks, blockages, or component damage, allowing for swift corrective action to prevent further failure and minimize production disruptions.



智控系统

Intelligent Control System

升级智能遥控操作，让工作更加便捷高效，减少人力成本，满足不同场景使用需求。

Upgraded intelligent remote control operation makes work more convenient and efficient, reduces labor costs, and meets the needs of various application scenarios.

设备特点

Equipment Features

材质 Material Properties



1. 抵御油液化学侵蚀

Resistance to Oil Chemical Corrosion

不锈钢 (如 304/316L) 对液压油中的添加剂 (如抗磨剂、抗氧化剂)、酸性物质 (油液氧化产物) 具有强耐受性, 避免壳体、滤芯支架等部件被腐蚀剥落, 防止二次污染油液。

Stainless steel (e.g., 304/316L) has high resistance to hydraulic oil additives (e.g., anti-wear agents, antioxidants) and acidic substances (oil oxidation products). It prevents corrosion and spalling of housings, filter element supports and other components, avoiding secondary contamination of oil.

对比传统材质: 碳钢易生锈、铝合金易被油液腐蚀, 可能导致金属碎屑进入油路, 引发设备故障。

Compared with traditional materials: Carbon steel is prone to rust, and aluminum alloy is susceptible to oil corrosion, which may cause metal debris to enter the oil circuit and trigger equipment failures.

2. 适应潮湿 / 腐蚀性场景

Adaptation to Humid/Corrosive Scenarios

在海洋工程、化工车间等潮湿或含腐蚀性气体的环境中, 不锈钢不易生锈, 延长设备户外或恶劣工况下的服役寿命。

In humid or corrosive gas environments such as marine engineering and chemical workshops, stainless steel is not easy to rust, extending the service life of the equipment under outdoor or harsh working conditions.

低杂质析出: 不锈钢材质纯净度高, 加工过程中不易产生铁屑、油污等残留, 且表面光滑 (粗糙度 $Ra \leq 0.8\mu m$), 减少油液滞留和污染物附着, 避免对清洁油液造成二次污染。

Low particulate impurity precipitation: Stainless steel has high purity, is not easy to produce residual iron filings, oil stains and other particulate impurities during processing, and has a smooth surface (roughness $Ra \leq 0.8\mu m$), which reduces oil retention and contaminant adhesion, avoiding secondary contamination of clean oil.

对比铸铁材质：铸铁表面多孔易吸附油泥，且铸造过程中可能残留型砂，污染油液风险更高。

Compared with cast iron: The porous surface of cast iron is easy to adsorb oil sludge, and molding sand may remain during the casting process, leading to a higher risk of oil contamination.

3. 便于清洁维护

Easy to Clean and Maintain

不锈钢表面不易结垢，可通过高压冲洗、化学清洗等方式快速去除附着杂质，维护后不易残留清洗剂，保持设备内部洁净。

The smooth surface of stainless steel is not easy to scale. Adhered particulate impurities can be quickly removed by high-pressure washing, chemical cleaning and other methods. No cleaning agent residue is left after maintenance, keeping the inside of the equipment clean.

4. 耐高温与抗氧化，适应宽温工作

High Temperature and Oxidation Resistance, Adaptable to Wide Temperature Operation.

功能更全面 Comprehensive Functions

设备除拥有上述多系统功能外，还配置前置过滤器（帮助降低耗材成本），部分设备配置一二级过滤切换功能。

In addition to the above multi-system functions, the equipment is equipped with a pre-filter (to help reduce consumable costs), and some models are configured with primary and secondary filtration switching function.



设备特点

Equipment Features

布局设计合理，后期维护便捷。

Rational Layout Design for Convenient Post-maintenance



设备设计构造兼顾功能全面、使用方便，维修便捷等要素：

The equipment design and structure take into account comprehensive functions, ease of use, convenient maintenance and other factors:

1、尺寸方面结合不同使用场景，浓缩尺寸，方便运输及流动作业。

1. In terms of size, it is compact according to different application scenarios for easy transportation and mobile operation.

2、设备各部件连接采用活结卡箍方式，每个部件可单独拆卸，方便维修及配件更换，

2. All components of the equipment are connected by union clamps, and each component

can be disassembled independently for convenient maintenance and spare parts replacement.

3、设备均设置废油排净口和泄压排气阀，方便后期清洁和滤芯更换，

3. The equipment is equipped with a waste oil drain port and a pressure relief and exhaust valve for convenient post-cleaning and filter element replacement.

4. 设置独立电控系统，不仅操作简单方便，同时做到油电分离，检修方便，作业更安全，排列更科学。

4. An independent electric control system is set up, which is not only simple and convenient to operate, but also achieves oil-electric separation, facilitating maintenance, ensuring safer operation and more scientific arrangement.

双过滤系统

Dual Filtration System

降低设备故障：减少杂质导致的卡阀、磨损等问题，提升系统稳定性。

Reduce equipment failures: Reduce problems such as valve jamming and wear caused by impurities, improving system stability.

延长油液寿命：减少污染物对油液的催化变质作用，降低换油频率。

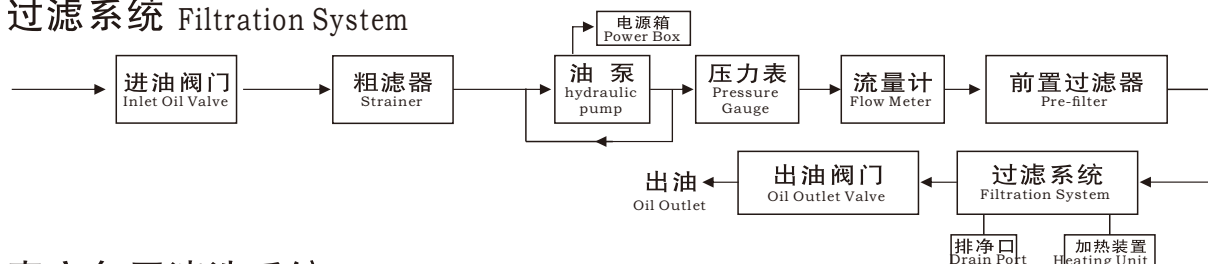
Extend oil service life: Reduce the catalytic deterioration of oil by contaminants and lower the oil change frequency.



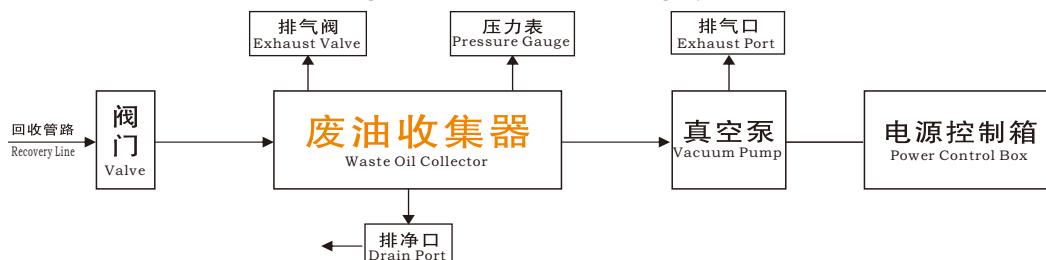
设备工作原理、技术分析

Equipment Working Principle and Technical Analysis

过滤系统 Filtration System



真空负压清洗系统 Vacuum Negative Pressure Cleaning System



NAS1638污染度等级 (100mL油中允许粒子数)

NAS1638 Contamination Grade (Allowable Particle Count in 100mL Oil)

NAS等级 NAS Grade	不同粒子直径 (μm) 允许的个数 Allowable Number of Particles by Different Particle Sizes (μm)				
	5-15	15-25	25-50	50-100	>100
1	500	89	16	3	1
2	1000	178	32	6	1
3	2000	256	63	11	2
4	4000	712	126	22	4
5	8000	1425	253	45	8
6	16000	2850	506	90	16
7	32000	5700	1012	180	32
8	64000	11400	2025	360	64
9	128000	22800	4050	720	128
10	256000	45600	8100	1440	256
11	512000	91200	16200	2880	512
12	1,024,000	182400	32400	5760	1024
13	2,048,000	364800	64800	11520	2050

FANJING Filtration Grade
凡净过滤等级
New Oil Grade
新油等级
Filtration or Replacement Required
需过滤或更换

NAS1638 等级标准限定各类液压系统油液允许的污染度等级。

The NAS1638 grade standard defines the allowable contamination grade of oil for various hydraulic systems.

目前国内制造出厂的液压系统，开始使用时的油液污染度等级都控制在 NAS9 级及以下，

At present, the oil contamination grade of hydraulic systems manufactured and delivered in China is controlled at NAS Grade 9 or below at the initial use stage.

当污染度等级升到 NAS10~11 液压系统会偶尔出现故障。

When the contamination grade rises to NAS 10~11, the hydraulic system will occasionally fail.

当油液的污染度等级升到 NAS12 级以上时，则会经常出现故障，此时必须对液压油进行循环过滤。

When the oil contamination grade rises above NAS 12, frequent failures will occur, and the hydraulic oil must be circulated and filtered at this time.

油品过滤设备

Oil Filtration Equipment

FY25-3A

产品介绍

Product Overview

凡净工业油品过滤设备FY25-3A，设备体积小方便移动携带，集脱渣、脱水、脱色、除味为一体，过滤洁净度达NAS6-9级，同时不改变油品抗磨、粘性及各种添加剂成分。延长油品使用周期；在制造工厂、机械、机械维修厂等工业用油领域广泛使用。本企业通过质量管理体系ISO9001认证。

FANJING Industrial Oil Filtration Equipment FY25-3A is a compact and mobile device that integrates slag removal, dehydration, decolorization and deodorization. It achieves a filtration cleanliness level of NAS 6-9, while preserving the anti-wear properties, viscosity and all additive components of the oil. It extends the service life of the oil and is widely used in industrial oil applications such as manufacturing plants, machinery, and mechanical repair shops. Our company is certified under the ISO 9001 Quality Management System.



产品参数

Product Parameters

产品尺寸：长1米×宽0.63米×高1.1米

Product Dimensions: 1m (Length) × 0.63m (Width) × 1.1m (Height)

产品重量：85KG

Product Weight: 85KG

过滤速度：120L-150L/h（以46#液压油精滤为参考）；300-400L/h（轻质油如柴油等）

Filtration Speed: 120L-150L/h (reference for fine filtration of 46# hydraulic oil); 300-400L/h (reference for light oils such as diesel)

电源配置：标配220V（可定制380V）

Power Supply: Standard 220V (380V customizable)

设备功率：最大3.45KW：过滤0.45KW、加热3KW(视低温情况使用)

Equipment Power: Max. 3.45KW: Filtration 0.45KW, Heating 3KW (for use in low-temperature conditions)

过滤精度：0.1 μm；(NAS6-9级)

Filtration Accuracy: 0.1 μm; (NAS 6-9 Grade)

功能配置：高精过滤、恒温加热、可视观察

Functional Configuration: High-precision filtration, constant-temperature heating, visual observation

适应油品：液压油等除机油、黄油、汽油外的大部分工业用油

Suitable for: Most industrial oils, such as hydraulic oil, excluding engine oil, grease, and gasoline

设备材质：不锈钢

Equipment Material: Stainless Steel

产品定位：工程机械、机械过滤保养服务、轻质油过滤、工厂自用

Product Positioning: Construction machinery, mechanical filtration maintenance services, light oil filtration, in-plant use.

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-5A2



型号: FY25-5A2

滤芯数量: 5 支

最大流量: 120-150L/h

重量: 150kg

材质: 不锈钢

最大功率: 4.4KW

Model: FY25-5A2

Filter Element Quantity: 5 pcs

Max Flow Rate: 120-150L/h

Weight: 150kg

Material: Stainless Steel

Max Power: 4.4KW

适用场景: 个体工厂自用

功能: 过滤、抽换油、加热 可视观测

电源: 220V/380V

设备尺寸: 950×700×1100mm

Application Scenario: Factory Use

Functions: Filtration, Oil Suction & Replacement, Heating, Visual Observation

Power Supply: 220V/380V

Dimension: 950×700×1100mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

F Y 25 - 5 B₃



型号: FY25-5B₃

滤芯数量: 5 支

最大流量: 120-150L/h

重量: 200kg

材质: 不锈钢

最大功率: 5.3KW

Model: FY25-5B₃

Filter Element Quantity: 5 pcs

Max Flow Rate: 120-150L/h

Weight: 200kg

Material: Stainless Steel

Max Power: 5.3KW

适用场景: 个体工厂自用

功能: 过滤、抽换油、加热、清洗、智控、
可视观测

电源: 220V/380V

设备尺寸: 1200×700×1270mm

Application Scenario: Factory Use

Functions: Filtration, Oil Suction &
Replacement, Heating, Cleaning,
Intelligent Control, Visual
Observation

Power Supply: 220V/380V

Dimension: 1200×700×1270mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-7A₂



型号: FY25-7A₂

滤芯数量: 7 支

最大流量: 200L/h

重量: 180kg

材质: 不锈钢

最大功率: 4.4KW

Model: FY25-7A₂

Filter Element Quantity: 7 pcs

Max Flow Rate: 200L/h

Weight: 180kg

Material: Stainless Steel

Max Power: 4.4KW

适用场景: 个体工厂自用

功能: 过滤、抽换油、加热、可视观测

电源: 220V/380V

设备尺寸: 950×700×1170mm

Application Scenario: Factory Use

Functions: Filtration, Oil Suction & Replacement, Heating, Visual Observation

Power Supply: 220V/380V

Dimension: 950×700×1170mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-7B₃



型号: FY25-7B₃

滤芯数量: 7 支

最大流量: 200L/h

重量: 250kg

材质: 不锈钢

最大功率: 5.3KW

Model: FY25-7B₃

Filter Element Quantity: 7 pcs

Max Flow Rate: 200L/h

Weight: 250kg

Material: Stainless Steel

Max Power: 5.3KW

适用场景: 个体工厂自用、过滤服务

功能: 过滤、抽换油、加热、清洗、智控、
可视观测

电源: 220V/380V

设备尺寸: 1250×700×1270mm

Application Scenario: Factory Use,
Oil Filtration Service

Functions: Filtration, Oil Suction &
Replacement, Heating, Cleaning,
Intelligent Control, Visual
Observation

Power Supply: 220V/380V

Dimension: 1250×700×1270mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-12A₂



型号: FY25-12A₂

滤芯数量: 12 支

最大流量: 350-400L/h

重量: 250kg

材质: 不锈钢

最大功率: 6.75KW

Model: FY25-12A₂

Filter Element Quantity: 12 pcs

Max Flow Rate: 350-400L/h

Weight: 250kg

Material: Stainless Steel

Max Power: 6.75KW

适用场景: 个体工厂自用

功能: 过滤双系统、抽换油、加热、可视观测

电源: 220V/380V

设备尺寸: 1250×700×1170mm

Application Scenario: Factory Use

Functions: Dual Filtration System,
Oil Suction & Replacement, Heating,
Visual Observation

Power Supply: 220V/380V

Dimension: 1250×700×1170mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-12B₃



型号: FY25-12B₃

滤芯数量: 12 支

最大流量: 350-400L/h

重量: 300kg

材质: 不锈钢

最大功率: 9.35KW

Model: FY25-12B₃

Filter Element Quantity: 12 pcs

Max Flow Rate: 350-400L/h

Weight: 300kg

Material: Stainless Steel

Max Power: 9.35KW

适用场景: 工程机械、工厂滤油服务、工厂自用

功能: 过滤双系统、抽换油、加热 清洗、气泵、可视观测

电源: 220V/380V

设备尺寸: 1250×950×1270mm

Application Scenario: Engineering Machinery, Factory Oil Filtration Service, Factory Use

Functions: Dual Filtration System, Oil Suction & Replacement, Heating, Cleaning, Air Pump, Visual Observation

Power Supply: 220V/380V

Dimension: 1250×950×1270mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-14A₂



型号: FY25-14A₂

滤芯数量: 14 支

最大流量: 400-500L/h

重量: 450kg

材质: 不锈钢

最大功率: 8.75KW

Model: FY25-14A₂

Filter Element Quantity: 14 pcs

Max Flow Rate: 400-500L/h

Weight: 450kg

Material: Stainless Steel

Max Power: 8.75KW

适用场景: 工程机械滤油服务、个体、工厂自用

功能: 过滤双系统、抽换油、加热 可视观测、1/2 级切换

电源: 380V

设备尺寸: 1800×700×1170mm

Application Scenario: Engineering Machinery, Oil Filtration Service, Factory Use

Functions: Dual Filtration System, Oil Suction & Replacement, Heating, Visual Observation, Primary/Secondary Switching

Power Supply: 380V

Dimension: 1800×700×1170mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-14B₃



型号: FY25-14B₃

滤芯数量: 14 支

最大流量: 400-500L/h

重量: 400kg

材质: 不锈钢

最大功率: 11.3KW

Model: FY25-14B₃

Filter Element Quantity: 14 pcs

Max Flow Rate: 400-500L/h

Weight: 400kg

Material: Stainless Steel

Max Power: 11.3KW

适用场景: 工程机械、工厂滤油服务

功能: 过滤双系统、抽换油、加热、智控、
可视观测、1/2 级切换

电源: 380V

设备尺寸: 1800×950×1270mm

Application Scenario: Engineering
Machinery, Factory Oil Filtration
Service

Functions: Dual Filtration System,
Oil Suction & Replacement, Heating,
Intelligent Control, Visual
Observation, Primary/Secondary
Switching

Power Supply: 380V

Dimension: 1800×950×1270mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-24A₂



型号: FY25-24A₂

滤芯数量: 24 支

最大流量: 800-1000L/h

重量: 450kg

材质: 不锈钢

最大功率: 13.5KW

Model: FY25-24A₂

Filter Element Quantity: 24 pcs

Max Flow Rate: 800-1000L/h

Weight: 450kg

Material: Stainless Steel

Max Power: 13.5KW

适用场景: 工程机械、工厂滤油服务

功能: 过滤双系统、抽换油、加热、可视观测、1/2 级切换

电源: 380V

设备尺寸: 2000×700×1170mm

Application Scenario: Engineering Machinery, Factory Oil Filtration Service

Functions: Dual Filtration System, Oil Suction & Replacement, Heating, Visual Observation, Primary/Secondary Switching

Power Supply: 380V

Dimension: 2000×700×1170mm

设备型号参数图及细节

Equipment Model Parameter Chart and Details

FY25-24B₃



型号: FY25-24B₃

滤芯数量: 24 支

最大流量: 800-1000L/h

重量: 500kg

材质: 不锈钢

最大功率: 16.1KW

Model: FY25-24B₃

Filter Element Quantity: 24 pcs

Max Flow Rate: 800-1000L/h

Weight: 500kg

Material: Stainless Steel

Max Power: 16.1KW

适用场景: 工程机械、工厂滤油服务

功能: 过滤双系统、抽换油、加热、智控、
可视观测、1/2 级切换

电源: 380V

设备尺寸: 2000×950×1270mm

Application Scenario: Engineering
Machinery, Factory Oil Filtration
Service

Functions: Dual Filtration System,
Oil Suction & Replacement, Heating,
Intelligent Control, Visual
Observation, Primary/Secondary
Switching

Power Supply: 380V

Dimension: 2000×950×1270mm

负压清洗设备

Negative Pressure Cleaning Equipment

FY25-QX

产品介绍

Product Overview

凡净过滤FY25-QX型设备是一款独立高效清洗系统，基于真空负压原理，能够快速、彻底地清除各类油箱中的铜粉、铁屑、油泥等杂质。该系统有效解决了传统清洗方式工序复杂、难度大、耗时长等痛点，广泛应用于工程机械、工厂设备及维修厂等多个领域。

FANJING Filtration Equipment FY25-QX is a standalone high-efficiency cleaning system designed to quickly and thoroughly remove contaminants such as copper powder, iron filings, and sludge from various types of oil tanks, based on the principle of vacuum negative pressure. This system effectively addresses the challenges associated with traditional cleaning methods such as complex procedures, high difficulty, and time-consuming processes. It is widely used in various fields, including construction machinery, industrial equipment, and repair shops.



产品参数

Product Parameters

产品尺寸：长1000mm宽450mm高1000mm

Product Dimensions: 1000mm (Length) × 450mm (Width) × 1000mm (Height)

产品重量：120KG

Product Weight: 120KG

负压速度：40m³/h

Negative Pressure Speed: 40m³/h

电源配置：220V, 10A

Power Supply: 220V, 10A

设备功率：1.5Kw

Equipment Power: 1.5KW

设备容量：130L

Tank Capacity: 130L

工作压力：0.1 hPa(mbar)

Working Pressure: 0.1 hPa (mbar)

适应范围：各类工程机械油箱、机械油箱、油泥杂质等清洗

Applicable Scope: Cleaning of various construction machinery oil tanks, mechanical oil tanks, sludge and contaminants

设备材质：不锈钢

Equipment Material: Stainless Steel

产品定位：工程机械、机械清洗保养服务（服务型）

Product Positioning: Construction machinery, mechanical cleaning maintenance services (for maintenance services).

FF系列滤油机简介

Introduction to FF Series Oil Filter

凡净FF系列滤油机，专业工业用油脏油过滤，微米级高精过滤，去除油品杂质、灰尘、铜粉铁屑等，提升油品洁净度到使用标准。适用于工业用油脏油过滤再使用，为机械用油开源节流，降低维修故障率。

The FF series oil filter is a professional filter for contaminated industrial oil, featuring micron-level high-precision filtration. It removes oil impurities, dust, copper powder, iron shavings, etc., and improves oil cleanliness to the service standard. Suitable for filtration and reuse of contaminated industrial oil, it saves oil consumption for mechanical equipment, reduces failure rate.



型号: FY-001

滤芯数量: 5 支

最大流量: 350-400L/h

材质: 碳钢

最大功率: 0.1KW

Model: FY-001

Filter Element Quantity: 5 pcs

Max Flow Rate: 350-400L/h

Material: Carbon Steel

Max Power: 0.1KW

用途: 适用于各种工业用油

功能: 滤油

电源: 220W

设备尺寸: 750×660×550mm

Application: Suitable for various industrial oils

Function: Oil Filtration

Power Supply: 220W

Dimension: 750×660×550mm

滤芯

Filter Elements

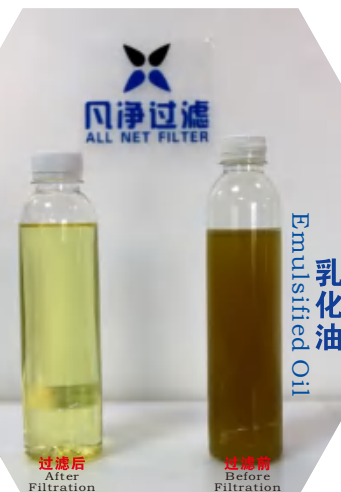
	功 能 Functions	脱渣、脱水、脱色、除味 Slag removal, dehydration, decolorization, deodorization
	精 度 Precision	0.1 μ m
	特 点 Features	综合性能全面 Comprehensive and excellent performance

	功 能 Functions	脱 水 Dehydration
	精 度 Precision	5 μ m
	特 点 Features	流量大、后期无维护成本 Large flow rate, no post maintenance cost

	功 能 Functions	脱 渣 Slag removal
	精 度 Precision	1 μ m
	特 点 Features	流量大、后期无维护成本 Large flow rate, no post maintenance cost

过滤前后对比

Comparison Before and After Filtration



设备适用场景范围

Equipment Application Scenarios and Scope



工程机械：挖掘机、旋挖钻机、吊车、混凝土泵车、专项作业车等

Construction machinery: Excavators, rotary drilling rigs, cranes, concrete pump trucks, special operation vehicles, etc.

制造业：所有涉及液压油的设备均适用该产品

Manufacturing industry: This product is applicable to all equipment involving hydraulic oil.

炼油厂：可用于柴油、齿轮油、等油品的过滤

Oil refineries: Can be used for filtration of diesel oil, gear oil and other oils.

加工中心：车床、折板机、剪板机、压铸机等

Machining centers: Lathes, bending machines, shearing machines, die-casting machines, etc.

电力：各类变压器油液的过滤

Electric power industry: Filtration of various transformer oils.

水力发电：可用于水闸门，提升机等设备的油液过滤

Hydropower generation: Can be used for oil filtration of sluice gates, hoists and other equipment.

主要部件展示

Main Components Display



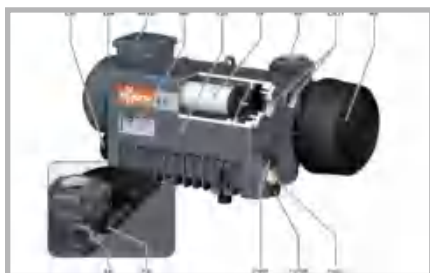
整机材质
Overall Equipment Material



加热管
Heating Tube



智能控制
Intelligent Control System



真空泵
Vacuum Pump



减速电机
Gear Motor



气泵
Air Pump



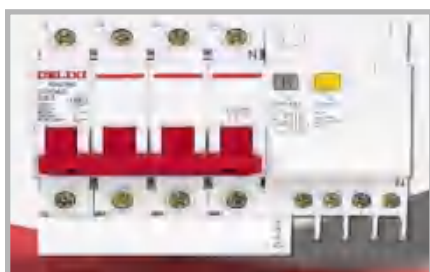
无缝钢管
Seamless Steel Pipe



卡箍活接
Union Clamp



观察视盅
Sight Glass



电器元件
Electrical Components



齿轮泵
Gear Pump



不锈钢法兰
Stainless Steel Flange

拦精灵过滤器

LANJINGLING Filter

主要针对工程机械领域而研发，过滤精度可达到0.1μm，该产品具有脱渣、脱水、脱色、除味等功能。深度在线循环过滤液压系统还原油品洁净度，减少设备部件磨损，延长设备使用寿命，节约用油成本，降低设备故障概率。

Specially developed for the engineering machinery field, the filter has a filtration precision of up to 0.1μm and features slag removal, dehydration, decolorization and deodorization functions. It realizes deep online circulating filtration of the hydraulic system to restore oil cleanliness, reduce wear of equipment components, extend equipment service life, save oil costs and lower equipment failure probability.



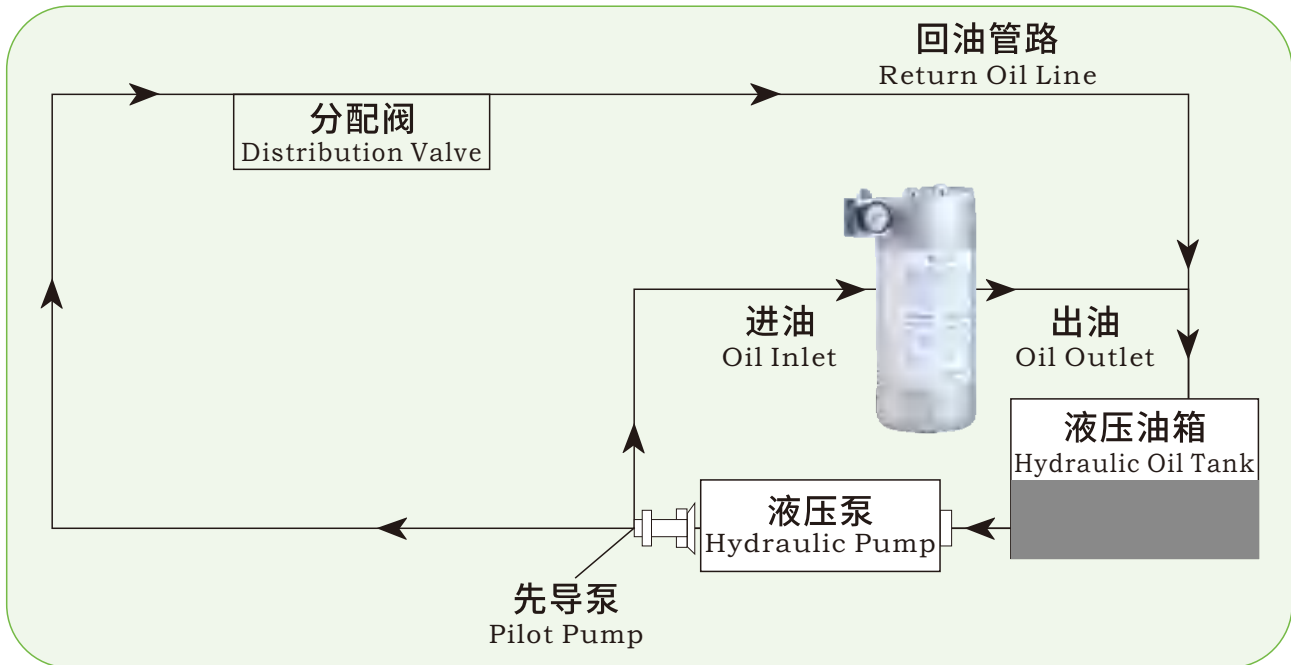
产品参数

Product Parameters

品牌 Brand	拦精灵 LANJINGLING	产品材质 Product Material	铝合金 Aluminum Alloy
重量 Weight	4kg	壁厚 Wall Thickness	5mm
尺寸 Dimension	325mm*180mm	工艺 Craftsmanship	高压铸造 High-pressure die casting
工作压力 Working Pressure	0.2MPa	质保 Warranty	一年 One year

工作原理图

Working Principle Diagram



液 压 系 统 高精密过滤器
脱渣脱水 脱色除味
High-precision Filter for Hydraulic Systems
Slag Removal, Dehydration, Decolorization & Deodorization

液压系统保养，持续净化是关键！

Continuous purification is the key to hydraulic system maintenance!



95%以上的液压故障都是因液压系统污染引起，治理液压系统污染刻不容缓！

More than 95% of hydraulic failures are caused by hydraulic system contamination, so it is imperative to control hydraulic system contamination!

自身油压和流量的因素限制

Limitations of Excavator Oil Pressure and Flow

- ◆ 原机只能5-10微米以上的过滤精度；
- ◆ 5微米以下的杂质原机滤芯无法过滤，一直会系统内循环流动。

The original equipment can only achieve a filtration precision of 5-10μm and above; Contaminants below 5μm cannot be filtered by the original filter element and will circulate in the system for a long time.

细小粉末杂质给挖机带来的危害

Hazards of Fine Powder Contaminants to Excavators

- ◆ 细小颗粒杂质因挖机回油滤芯不能进行充分过滤，这部分杂质在系统内长时间循环，给挖机带来极大的磨损，加速缩短设备的使用寿命。

Fine particle impurities cannot be fully filtered by the excavator's oil return filter element, and these Contaminants circulate in the system for a long time, causing severe wear to the excavator and accelerating the shortening of equipment service life.

更换液压油

Hydraulic Oil Replacement

- ◆ 最多只能更换系统的2/3的油量；
- ◆ 1/3的旧油无法被更换，继续污染系统，5微米以下的杂质继续留在系统中。

At most, only 2/3 of the hydraulic oil in the system can be replaced; 1/3 of the used oil remains in the system, continuing to contaminate the fluid, with impurities smaller than 5 microns retained in the system.

杂质未彻底清除

Incomplete Particulate Impurity Removal

- ◆ 6-14微米的杂质含量过多，会加剧系统磨损导致系统提前退化失败；
- ◆ 4-6微米的杂质含量过多会产生系统淤积堵塞卡阀等故障。

Excessive impurities in the 6-14 micron range will accelerate system wear, leading to premature degradation and failure of the system; Excessive impurities in the 4-6 micron range will cause system failures such as sludge accumulation, blockage, and valve jamming.

普通换油

Conventional Oil Change

- ◆ 普通换油就是用系统旧油勾兑新油，或者说用新油稀释系统的旧油；
- ◆ 大量的微小杂质一直存在系统中。

A conventional oil change involves blending new oil with the system's used oil, or in other words, diluting the used oil with new oil; A large amount of fine impurities remains in the system permanently.

液压系统精准过滤

Precision Filtration for Hydraulic Systems

专治黑油 专治乳化 专治卡阀

Specialized in treating black oil, emulsified oil and valve jamming.

水份容易使液压油变稀，破坏油膜强度，降低液压油的润滑性能和防锈性能。

Moisture tends to thin hydraulic oil, damage oil film strength, and reduce the lubricating and antirust performance of hydraulic oil.

水份和液压油添加剂起化学反应，加速液压油的氧化，形成胶状物质，引起阀芯粘滞或堵塞等。

Moisture reacts chemically with hydraulic oil additives, accelerating oil oxidation, forming colloidal substances, and causing spool sticking or blockage.



游离水附着在液压元件表面，使金属表面腐蚀、生成锈斑，加剧磨损，还增加液压系统的固体污染。

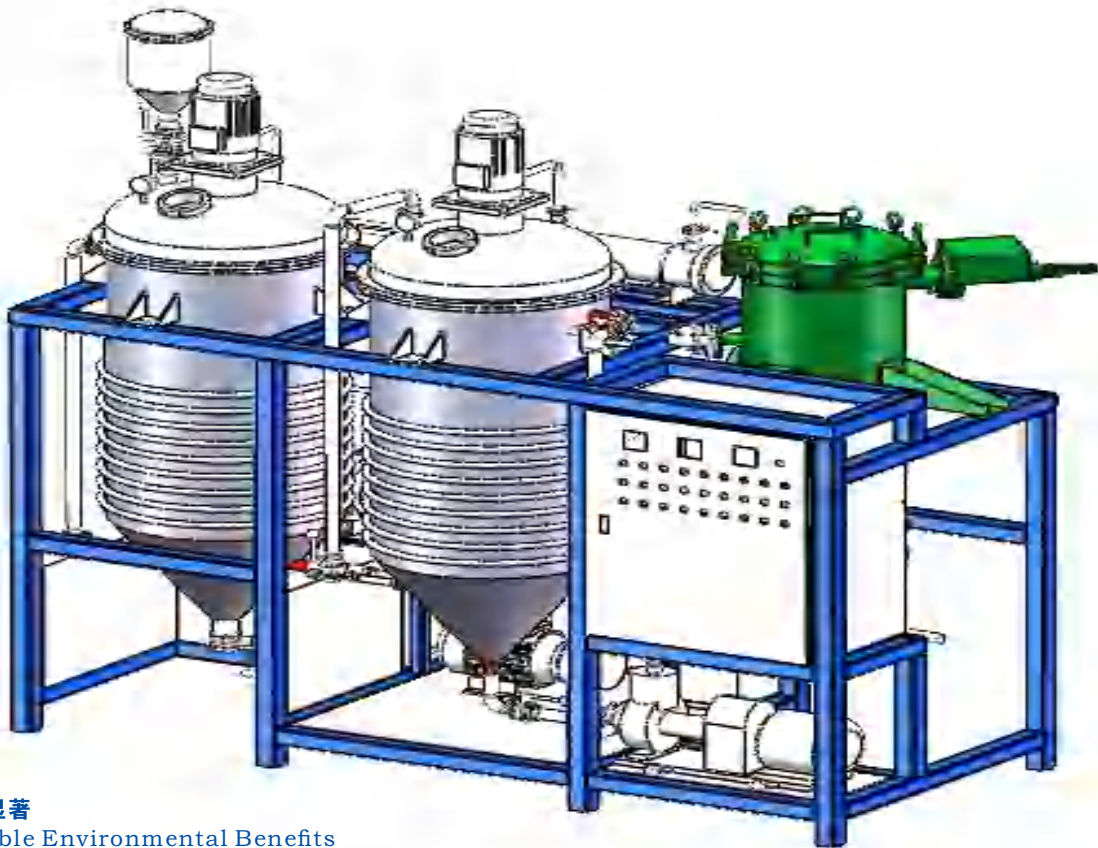
Free water adheres to the surface of hydraulic components, causing corrosion and rust on metal surfaces, aggravating wear, and increasing solid contamination of the hydraulic system.

在低温时液压油中的水份易结冰，引起液压系统功能失灵。

At low temperatures, moisture in hydraulic oil is easy to freeze, causing malfunction of the hydraulic system.

废旧工业油品提炼设备

Waste Industrial Oil Refining Equipment



环保效益显著

Remarkable Environmental Benefits

减少污染: 能对废旧液压油进行有效处理, 避免其随意排放或丢弃对土壤、水源和空气造成污染, 保护生态环境。

Pollution reduction: It can effectively treat waste hydraulic oil, avoid soil, water and air pollution caused by random discharge or disposal, and protect the ecological environment.

资源循环利用: 将废旧液压油转化为可再利用的油品或其他化工原料, 实现资源的循环利用, 降低对新资源的依赖。

Resource recycling: Convert waste hydraulic oil into reusable oil or other chemical raw materials to realize resource recycling and reduce dependence on new resources.

经济效益良好

Favorable Economic Benefits

生产成本降低: 相比生产新的液压油, 利用提炼设备处理废旧液压油的成本更低, 可为企业节省大量的生产成本。

Reduced production cost: Compared with producing new hydraulic oil, treating waste hydraulic oil with refining equipment has lower cost, which can save a lot of production costs for enterprises.

创造额外收益: 提炼后的产品可再次投入市场销售, 为企业带来额外的经济收益。

Additional income creation: The refined products can be put on the market for sale again, bringing additional economic income to enterprises.

设备性能可靠

Reliable Equipment Performance

自动化程度高: 具备先进的自动化控制系统, 可实现对提炼过程的精确控制, 减少人工操作, 提高生产效率和产品质量的稳定性。

High automation: Equipped with an advanced automatic control system, it can realize precise control of the refining process, reduce manual operation, and improve production efficiency and product quality stability.

适应性强: 可以处理不同种类和质量的废旧液压油, 能根据实际情况进行调整和优化提炼工艺。

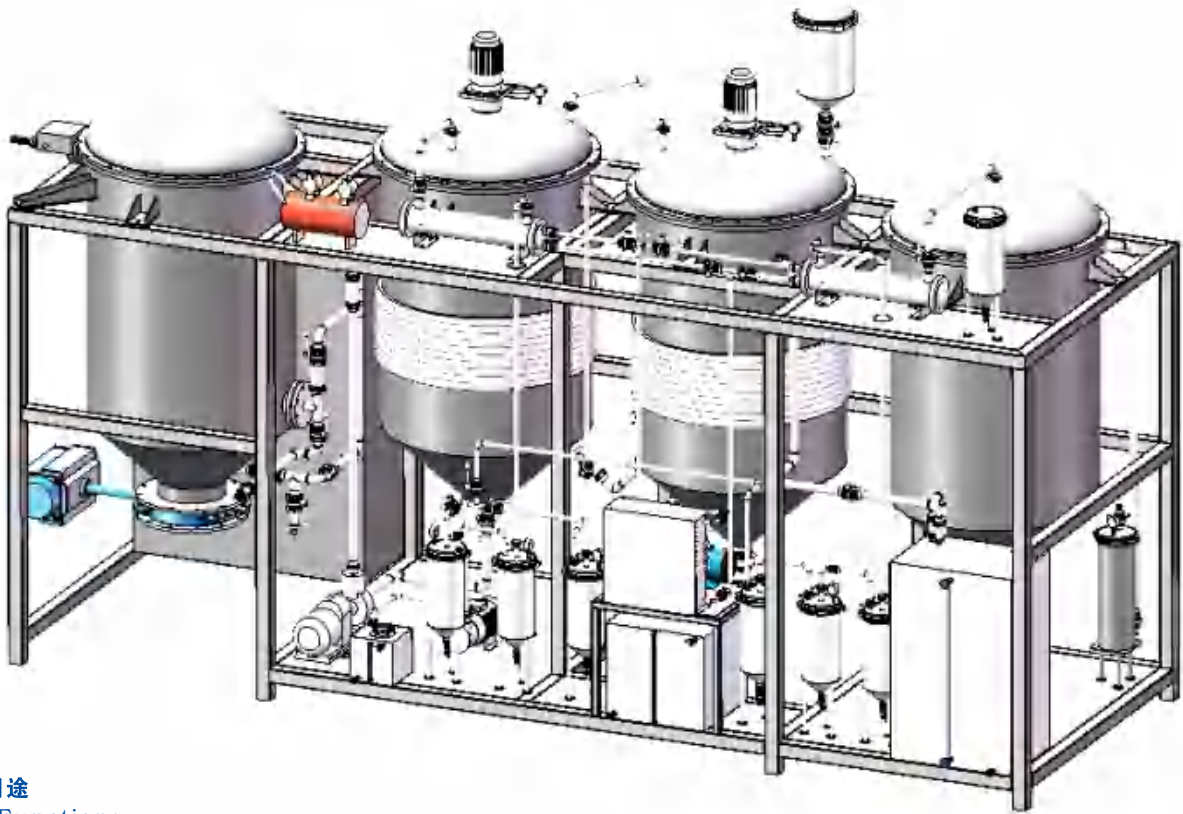
Strong adaptability: It can handle waste hydraulic oil of various types and qualities, and the refining process can be adjusted and optimized according to actual conditions.

安全性能高: 配备完善的安全保护装置, 如防火、防爆、防泄漏等系统, 确保生产过程的安全可靠, 降低安全风险。

High safety performance: Equipped with a complete set of safety protection devices such as fire prevention, explosion prevention and leakage prevention systems to ensure the safety and reliability of the production process and reduce safety risks.

废旧机油炼化设备

Waste Engine Oil Refining Equipment



主要用途

Core Functions

生产基础油：废旧机油炼化设备可将废旧机油中的杂质、水分等去除，经过催化、裂化、吸附、过滤等工艺，提炼出基础油，用于生产润滑油、润滑脂等产品。

Base oil production: The waste engine oil refining equipment can remove impurities, moisture and other substances from waste engine oil, and extract base oil through catalysis, cracking, adsorption, filtration and other processes, which is used to produce lubricating oil, grease and other products.

制取燃料油：通过特定的工艺，将废旧机油转化为燃料油，可用于工业锅炉、窑炉等的燃烧，替代部分传统化石燃料。

Fuel oil production: Through specific processes, waste engine oil is converted into fuel oil, which can be used for combustion in industrial boilers, kilns, etc., replacing part of traditional fossil fuels.

提取化工原料：从废旧机油中还可以提取出一些化工原料，如石蜡、沥青等，用于化工、建材等行业。

Chemical raw material extraction: Some chemical raw materials such as paraffin and asphalt can be extracted from waste engine oil for use in chemical, building materials and other industries.

优势

Advantages

环保效益突出：防止废旧机油随意排放或丢弃对环境造成污染，减少土壤、水源污染及大气污染，同时实现资源回收利用，符合环保理念。

Outstanding environmental benefits: Prevent environmental pollution caused by random discharge or disposal of waste engine oil, reduce soil, water and air pollution, and realize resource recycling at the same time, in line with the concept of environmental protection.

经济效益明显：降低企业生产基础油和燃料油的成本，通过生产可销售的产品创造额外收入，具有良好的投资回报率。

Obvious economic benefits: Reduce the cost of enterprises in producing base oil and fuel oil, create additional income through marketable products, and have a good return on investment.

设备技术先进：自动化程度高，能精确控制炼化过程，保证产品质量稳定，且具备高效的裂化、分离和净化功能，提高生产效率，同时安全性能高，配备多种安全防护装置，保障生产安全。

Advanced equipment technology: High degree of automation, able to accurately control the refining process to ensure stable product quality, with efficient cracking, separation and purification functions to improve production efficiency; at the same time, it has high safety performance and is equipped with a variety of safety protection devices to ensure production safety.

Mf多级低温冷处理分离系统 FJWM10AT

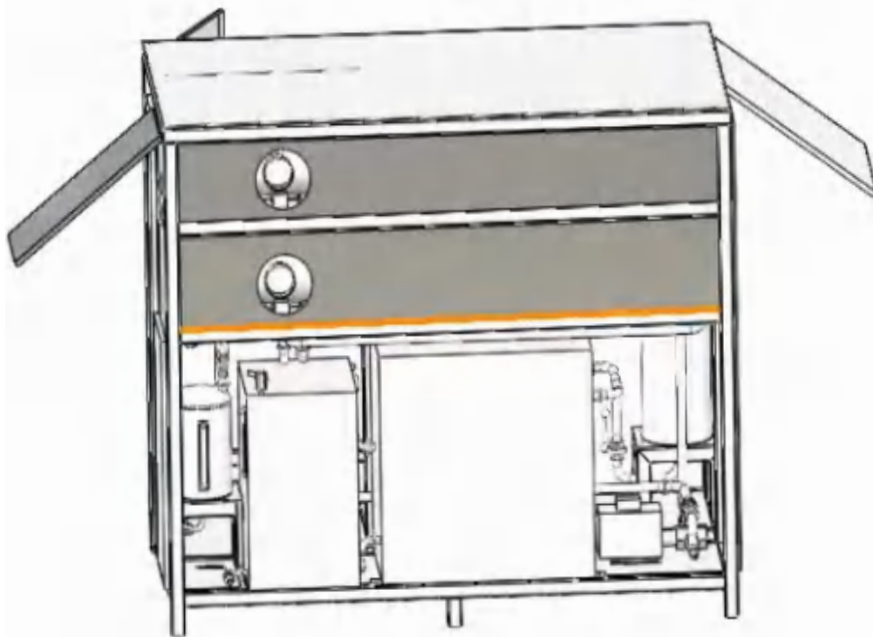
MF Multi-Stage Cold Treatment Separation System — Model FJWM10AT

产品介绍

Product Overview

MF多级低温冷处理分离系统采用20微米、3微米、1微米、0.1微米等多级不同精度类型滤网对柴油中不同大小颗粒物杂质进行拦截分离，从而提高油品洁净度，经多级拦截分离后洁净度可达到NAS5-8级。同时采用当前领先的冷处理膜聚集分离技术高效彻底分离柴油中的水分。处理后的柴油中颗粒物杂质和水分含量完全达到国标（中国）车用柴油使用标准。

Featuring multi-stage filters with precision ratings of 20 μ m, 3 μ m, 1 μ m, and 0.1 μ m, the MF Multi-Stage Cold Treatment Separation System intercepts and removes particulate contaminants of various sizes from diesel fuel, improving oil cleanliness to NAS Grade 5-8 after filtration. Meanwhile, it adopts the leading cold treatment membrane aggregation and separation technology to separate water from diesel oil efficiently and thoroughly. The content of particulate impurities and water in the treated diesel oil fully complies with the national standard (China) for automotive diesel oil application.



产品特点

Product Features

可靠
Reliable

成熟先进的技术确保过滤效果
Mature and advanced technology ensures excellent filtration performance
精选不锈钢材质确保经久耐用
Premium stainless steel construction ensures long-lasting durability

普惠
Cost-effective

后期使用基本0耗材费用
Minimal consumable cost
低能耗功率用电少
Low power consumption

易用
Easy to Operate

多边门框设计每个部位便捷清洁
Multi-sided door frame design for easy cleaning access
傻瓜式操作使用方便
simple operation for user convenience
耐候性强，0-45℃轻松驾驭。
weather-resistant and reliable from 0 to 45° C

保障
Assurance

专利产品
Patented Product
质量体系认证。
Quality Management System Certified

Mf多级低温冷处理分离系统 FJWM10AT

MF Multi-Stage Cold Treatment Separation System — Model FJWM10AT

产品参数

Product Parameters

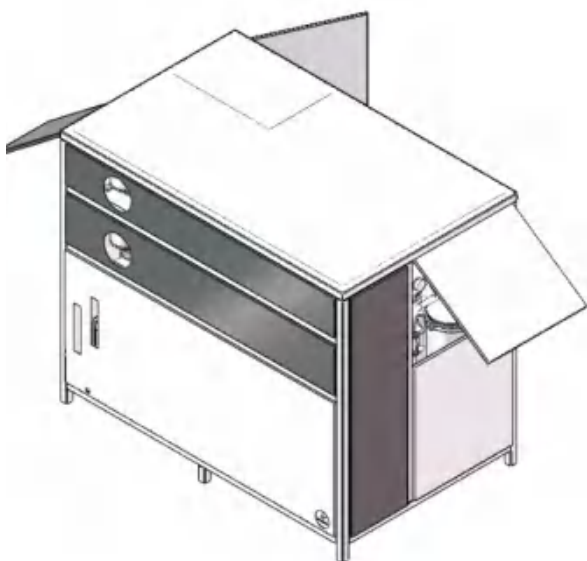
固体污染物过滤精度 Solid Contaminant Filtration Rating	
一级过滤固体颗粒物 1st stage (solid particles)	30微米 30μm
二级过滤污染颗粒 2nd stage (contaminant particles)	3微米 3μm
三级浮游杂质 3rd stage (suspended impurities)	1微米 1μm
四级细微悬浮杂质 4th stage (fine suspended impurities)	0.1微米 0.1μm
过滤后油品洁净度 Oil cleanliness after filtration	NAS5-8级 NAS Grade 5-8
水分处理分离值 Water Removal Performance	
水分含量范围 Water content range	0-5%
适配温度范围 Applicable Temperature Range	0-50℃
脱水后水含量值 Water content after dehydration	≤200ppm。
设备用材 Equipment Materials	
配电箱 Distribution box	碳钢 Carbon steel
主体部分（滤筒、支架、管道等） Main components (filter cartridges, supports, piping, etc.)	不锈钢 Stainless steel
电机 Motor	减速防爆电机 Explosion-proof geared motor
油泵 Oil pump	防爆泵 Explosion-proof pump
工作数据 Operating Data	
工作压力 Operating pressure	0-0.6MPa
工作功率 Operating power	3KW
尺寸数据 Dimensions	
设备尺寸 Overall dimensions	2270×1060×1380mm

Mf多级低温冷处理分离系统 FJWM10AT

MF Multi-Stage Cold Treatment Separation System — Model FJWM10AT

过滤效果展示

Filtration Effect Display



净化前
Before Purification



净化后
After Purification

过滤效果展示

Filtration Effect Display



柴油质量检测参照表

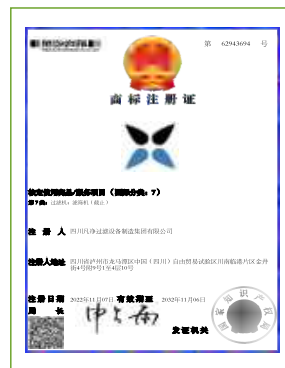
Diesel Quality Test Reference

样品名称 Sample Name		柴油VI Diesel VI	规格型号 Model				0#	取样日期 Sampling Date	2025年9月19日 September 19, 2025	
样品编号 Sample No.		Sr20250921009	取样罐号 Sampling Tank No.				V001	检测日期 Inspection Date	2025年9月21日 September 21, 2025	
样品状态 Sample State		液体 Liquid	委托单位 Applicant				凡净过滤 FANJING Filtration	执行标准 Applicable Standard	GB19147-2016	
分析项目 Analysis Item		质量指标 Quality Index					检验结果 Test Results	单项判定 Individual Result	试验方法 Test Method	
		5	0	-10	-20	-35				
1	密度(20℃)/(kg/m³) Density (20℃)/(kg/m³)		810-845			790-840		821.8	合格 Qualified	GB/T1884-2000 GB/T1885-1998
2	Cetane Number ≥ 十六烷值 ≥		51			49	47	52.6	合格 Qualified	GB/T386-2021
3	十六烷值数 ≥ Cetane Index ≥		46			46	43	49.5	合格 Qualified	SH/T0694-2000
4	馏程 Distillation Range	50%回收温度/℃ ≤ 50% Recovery Temperature/℃ ≤	300				257.3	合格 Qualified	GB/T6536-2010	
		90%回收温度/℃ ≤ 90% Recovery Temperature/℃ ≤	355				342.8	合格 Qualified		
		95%回收温度/℃ ≤ 95% Recovery Temperature/℃ ≤	365				357.6	合格 Qualified		
5	凝点/℃ ≤ Freezing Point/℃ ≤		5	0	-10	-20	-35	-10	合格 Qualified	GB/T510-2018
6	冷滤点/℃ ≤ Cold Filter Plugging Point/℃ ≤		8	4	-5	-14	-29	-4	合格 Qualified	NB/SH/T 0248-201
7	闪点(闭口)/℃ ≥ Flash Point (Closed Cup)/℃ ≥		60			50	45	68.0	合格 Qualified	GB/T 261-2021
8	硫含量(mg/kg) ≤ Sulfur Content (mg/kg) ≤		10				2.9	合格 Qualified	SH/T 0689-2000	
9	铜片腐蚀(50℃,3h)/级 ≤ Copper Strip Corrosion (50℃, 3h)/Grade ≤		1				1a	合格 Qualified	GB/T5096-2017	
10	酸度(以KOH计)/(mg/100ml) ≤ Acidity (as KOH)/(mg/100ml) ≤		7				4.53	合格 Qualified	GB/T 258-2016	
11	10%蒸余物残炭(质量分数)% ≤ Carbon Residue of 10% Distillation Residue (mass fraction)% ≤		0.3				0.01	合格 Qualified	GB/T17144-2021	
12	灰分(质量分数)/% ≤ Ash Content (mass fraction)/% ≤		0.01				0.001	合格 Qualified	GB/T508-1985	
13	水含量(体积分数)/% ≤ Water Content (volume fraction)/% ≤		痕迹 Trace				无 None	合格 Qualified	目测 Visual Inspection	
14	氧化安定性/(mg/100ml) ≤ Oxidation Stability/(mg/100ml) ≤		2.5				0.7	合格 Qualified	SH/T 0175-2004	
15	运动黏度(20℃)/(mm²/s) Kinematic Viscosity (20℃)/(mm²/s)		3.0-8.0		2.5-8.0		1.8-7.0	4.526	合格 Qualified	GB/T265-1988
16	润滑性磨痕直径60℃/μm ≤ Lubricity Wear Scar Diameter at 60℃/μm ≤		460				412	合格 Qualified	NB/SH/T0765-2021	
17	总污染物含量/mg/kg ≤ Total Contaminant Content/mg/kg ≤		24				7.9	合格 Qualified	GB/T33400-2016	
18	脂肪酸甲酯(体积分数)/% ≤ Fatty Acid Methyl Ester (volume fraction)% ≤		1				<0.023	合格 Qualified	GB.T23801-2021	
19	多环芳烃含量(质量分数)/% ≤ Polycyclic Aromatic Hydrocarbon Content (mass fraction)% ≤		7				4.8	合格 Qualified	NB/SH/T0606-2019	
20	气味 Odor		无异常 No Abnormality				无异常 No Abnormality	合格 Qualified	持证质检员判断 Judgment by Certified Quality Inspector	
21	氯含量/(mg/kg) ≤ Chlorine Content (mg/kg) ≤		5				0.2	合格 Qualified	SH/T 1757-2006 NB/SH/T 0977-2019	

检测结论
Conclusion 按GB19147-2016全项检验，并判定合格。
All items tested comply with GB 19147-2016. The product is qualified.备注：若对报告有异议，应于收到报告之日起15日内向本检测中心提出，逾期不予受理。
Remarks: Any objection to this report shall be submitted to the inspection center within 15 days from the date of receipt; late submissions will not be accepted.结论：合格
Conclusion: Qualified

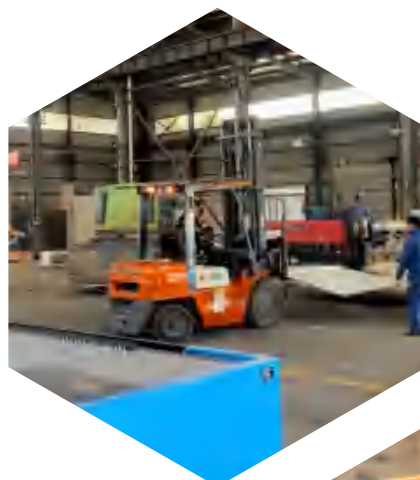
专利商标

Patents and Trademarks



生产车间

Production Workshop



我公司现有整机装备车间，核心元器件车间，铸造车间，数控精加工车间、打磨车间、成品车间等，拥有 6000 余平米厂房。

Our company currently has a complete machine assembly workshop, core component workshop, casting workshop, CNC machining workshop, grinding workshop, finished product workshop, etc., with a factory building of more than 6000 square meters.







OIL FILTRATION
EQUIPMENT

泸州凡净过滤设备制造有限公司

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