众城科技
Zhongcheng Technology

INTELLIGENT LUBRICATION SYSTEM SOLUTION

LONG-TERM PROTECTION CONSISTENT



Zhengzhou Zhongcheng Lubrication Technology Co., LTD

Centered on the success of customers
Create greater value for customers

WhatsApp：Sienna Ye +8619939969261　Vera +8619939131465

EMAIL：Sienna Yeah：yeqian@zclube.com　Vera：aimh.zclube.com

WEB：www.zclube.com

ADD：Building 14，Zone B Comprehensive Bonded Zone，Economic Development Zone，Zhengzhou，Henan Province

目录 CONTENTS

COMPANY PROFILE 03-12

Corporate Mission
Company Profile
Service Clients
Honours and Qualifications
Technical R&D Strength
Manufacturing Strength

CONSTRUCTION MACHINERY 13-30

Progressive Lubrication System
Single-line Lubrication System
Single-point Pump Lubrication System
ZCH7X Stirring Rod High Pressure Piston Pump
ZCHGF1 Hydraulic Lubrication Pump
ZCHGF2 Electric Lubrication Pump
ZCHSX Single-Point Pump
Chip Progressive Distributor
Block-type Aingle-line Distributor
Block-type Progressive Distributor
ZCH316 Manual Lubrication Pump
Application Cases

COMMERCIAL VEHICLES 31-44

Pressurised Lubrication System
Multi-line Plunger Lubrication System
ZCH82 Gear Pump
ZCH91 Multi-line Piston Pump
Pressurised Dispenser
Automatic Lubrication Controller
Application Cases

WIND POWER 45-60

Progressive Lubrication System
Single-line Lubrication System
ZCH5x Lubrication Pump
Wind Power Lubrication Pinion
ZL912Pro+ Precision Filtration Systems
ZL912PRO Precision Filtration Systems
ZL912MINI Precision Filtration Systems
Application Cases

PORT 61-92

ZCHG7X Industrial Intelligent Dual-Line Lubrication System
ZCHG7X Industrial Intelligent Single-Line Lubrication System
ZCH7X Progressive Lubrication System
ZL912 PRO+ Progressive Lubrication System
ZCHGU01/02 Electric Lubrication Pump
ZCHG7X Electric Lubrication Pump
ZCHGU08/14/24 Electric Lubrication Pump
ZCHILS Pump Station
Single-point Pump Lubrication System
ZCHFSL/ZCHFSG/ZCHFSKH Dual-line Distributor
ZCHCIF Intelligent Distribution Valve
Block-type Aingle-line Distributor
Chip Progressive Distributor
Modular Progressive Distributor
ZCHSLV Single-Line Distribution
ZCHSL Single-Line Distribution
ZCHRL Wire Rope Lubricator
ZCHSP Oil Supply Pump
ZCHU1 Hydraulic Directional Valve
ZCHPP Pneumatic Pump
ZCHG9X Electric Lubrication Pump
ZCH316 Manual Lubrication Pump
Application Cases
SKF-Related Products

OUR VALUES 93-94

LUBRICATE WITH CARE,MAKE THE WORLD RUN

COMPANY PROFILE

Zhengzhou Zhongcheng Lubrication Technology Co., Ltd. is a high-tech enterprise established under the auspices of Yutong Group, specialising in centralised lubrication systems, precision filtration systems and hydraulic systems.

The company upholds Yutong Group's corporate culture and has established product development and quality management systems tailored to various application scenarios; it has obtained certifications including ISO 9001 and IATF 16949.

The company operates a modern production base, R&D centre and testing laboratory, and holds over 100 proprietary intellectual property rights. Its products are widely used in sectors such as construction machinery, wind power generation, commercial vehicles, ports and metallurgy. As one of the leading suppliers in the lubrication industry, Zhongcheng has long provided support services to industry leaders including Yutong Bus and Goldwind Science & Technology. Its products are exported to over 70 countries and regions worldwide.

Zhongcheng Technology consistently adheres to the business philosophy of 'taking technological innovation as the core and customer needs as the guide', providing safe and reliable lubrication solutions to customers worldwide.

70+

The products are exported to more than 70 countries and regions worldwide

100+

Proprietary Intellectual Property Rights

SERVICE CLIENTS

宇通重工 · CAT · Jonyang 詹阳重工

XCMG 徐工集团 · LGMG · 长城重工

SANY · 宇通客车 · 金龙客车

FOTON 福田汽车 · 远程汽车 FARIZON AUTO · GOLDEN DRAGON 金旅客车

GOLDWIND 金风科技 · MINGYANG SMART ENERGY 明阳智能 · ENVISION 远景动力

CSSC 中国海装 · DEC 东方电气 东方风电 · 上海电气 SHANGHAI ELECTRIC

*Listed in no particular order

HONOURS AND QUALIFICATIONS

100+

Proprietary Intellectual Property Rights

30+

Has filed applications for over 30 invention patents



Certificates of Honour for the Company

Intellectual Property



Quality Management System Certification

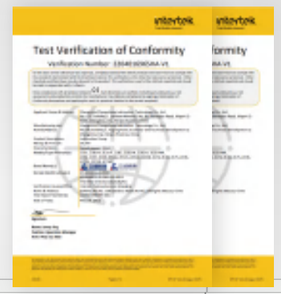




Environmental, Health and Safety Management System Certification



CE Certification



Zhengzhou-based companies in the process of becoming unicorns



3A-rated credit enterprise



TECHNICAL R&D STRENGTH

DEDICATED TO DELIVERING WORLD-CLASS LUBRICATION SYSTEM SOLUTIONS



TECHNICAL TEAM

The company's R&D team is co-led by senior industry experts in the fields of mechanical engineering, electrical engineering and hydraulics, and brings together key technical personnel from a range of disciplines. The team possesses a wealth of technical expertise, an outstanding spirit of innovation and robust execution capabilities. Working collaboratively to tackle challenges, the team continuously drives breakthroughs in core technologies and the iterative upgrading of the product range.



VERIFICATION CAPABILITIES

The company operates a dedicated research and development laboratory with the capability to conduct comprehensive validation of the entire range of centralised lubrication systems, enabling it to independently carry out all necessary experimental validation of both assembly performance and the performance of key components. Through a rigorous testing system and standardised validation processes, the company ensures that every product undergoes thorough evaluation before being launched onto the market, thereby providing a solid guarantee of long-term, stable operation.

PRODUCT OUTCOMES

Following several rounds of product development and optimisation, we have now established a product portfolio that is both diverse and well-structured, and which effectively covers virtually all the product types required by the market.



INNOVATIVE TECHNOLOGY

New technologies and products currently under development by the company include a new precision filtration system, an automated grease-changing smart lubrication system and a remote monitoring lubrication system. Future plans include the development of new products such as a big data-based equipment health management platform and an online precision filtration system for wind turbines.



ASSEMBLY PERFORMANCE TESTING CAPABILITIES

Pressure-displacement test

Voltage and current testing

Leak test

Noise testing

Reliability testing

Electromagnetic compatibility testing

UV ageing test

High and low temperature testing

Damp-heat test

Neutral salt spray test

IPX7 immersion test

Vibration testing

Wind turbine rotational testing

IPX1–X6 water spray tests

IPX dust resistance test

Hose pressure testing bench

…… ……

TESTING CAPABILITIES FOR THE PERFORMANCE OF CRITICAL COMPONENTS

Flow testing of the distributor

Pressure testing of the distributor

Distributor Seal Test

Testing of distribution network losses

Distributor Life Test

Motor Power Curve Testing

Motor torque testing

Motor Speed Test

Insulation Resistance Test

Controller Functionality Testing

Pressure test of the pump core assembly

Pump Core Reliability Testing

Piston seal test

Pneumatic precision measurement

Fully automatic imaging measurement

Surface roughness measurement

Spring Tensile and Compression Testing

Rockwell and Shore hardness testing

High and low temperature testing

Neutral salt spray test

Vibration testing

Metallographic analysis

Cleanliness testing

Coordinate measuring

Leak test

Drop impact test

…… ……

The laboratory has now established the necessary testing capabilities for assembly systems and key components, and has entered into a university-industry partnership with Wuhan University of Technology to strengthen its capacity for fundamental theoretical research.

// MANUFACTURING STRENGTH



LUBRICATION PUMP PRODUCTION LINE



DISPENSER PRODUCTION LINE



WIRE HARNESS PRODUCTION LINE



PRECISION MACHINING WORKSHOP



ASSEMBLY WORKSHOP



LABORATORY



FIVE-AXIS THROUGH-SPINDLE AUTOMATIC LATHE



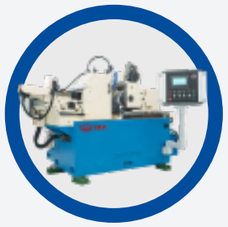
FOUR-AXIS MACHINING CENTRE



CYLINDRICAL GRINDING MACHINE



7-AXIS, 8-STATION VERTICAL HONING MACHINE



PRECISION CENTRELESS GRINDING MACHINE



SURFACE GRINDING MACHINE

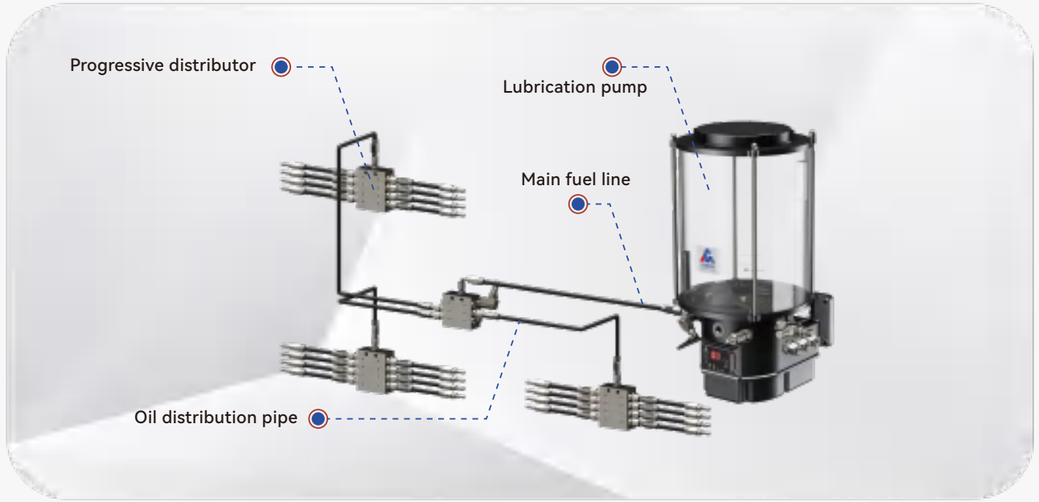


6160 CNC LATHE

Construction Machinery

工程机械篇

PROGRESSIVE LUBRICATION SYSTEM



Principle of operation: The system operates according to a pre-set programme. When the standby countdown ends, the lubrication pump starts, and grease is delivered via the main pipeline to the progressive distributor, from where it is metered to each lubrication point. When the operational countdown ends, the pump stops, the grease supply process concludes, and the system enters the next operating cycle.

HIGH-PERFORMANCE ADAPTATION

Withstands extreme low temperatures of -40°C and delivers a high-pressure output of 30 MPa, meeting the requirements of high-altitude, cold regions.

INTELLIGENT MANAGEMENT

Integrated CAN module, enabling connection to the vehicle-to-everything (V2X) network for remote monitoring.

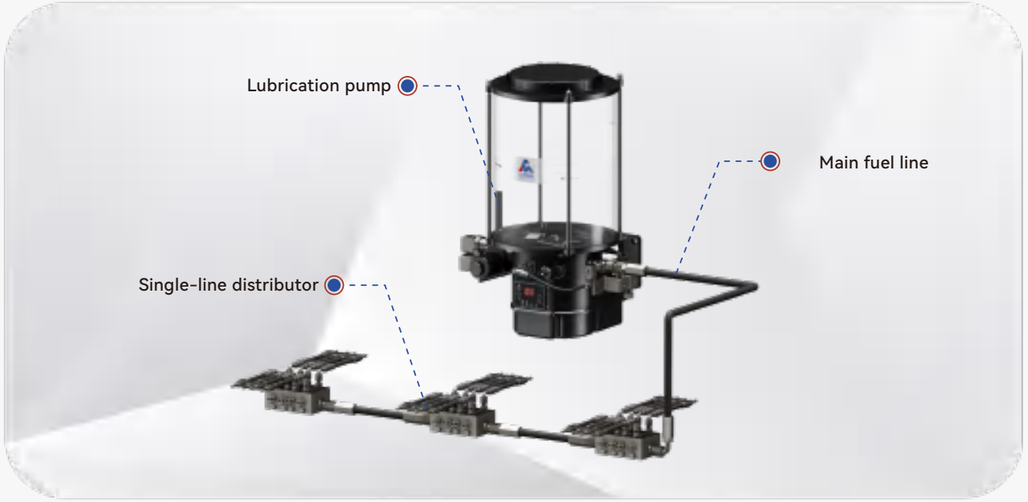
LONG-LIFE DESIGN

It utilises a DC permanent magnet gear motor with a service life of up to 12 years; the patented agitator design prevents cavitation and ensures a stable supply of fat; with an IP67 protection rating, it offers outstanding water and dust resistance.

ENERGY SAVING AND ENVIRONMENTAL PROTECTION

Metered oil dispensing reduces oil wastage (saving 80% of the amount used) and minimises environmental pollution.

SINGLE-LINE LUBRICATION SYSTEM



Principle of operation: Operating according to the preset programme, when the standby countdown ends, the lubrication pump starts up; grease is delivered through the main pipeline to the single-line distributor, and the system pressure gradually rises. The grease is then metered by the single-line distributor to each lubrication point. When the oil pressure at the end point reaches the sensor's actuation pressure, a pressure signal is fed back to the monitor. The lubrication pump stops operating after 1 minute, at which point the main pipeline is depressurised, and the process of metered oil storage and supply by the single-line distributor is completed; the system then enters the next operating cycle.

INDEPENDENT LUBRICATION

The oil injectors in each branch circuit operate independently; a failure in one branch circuit does not affect the normal operation of the other branch circuits.

LOWER COSTS

A single-line system with a parallel configuration, offering easier assembly and reduced maintenance costs.

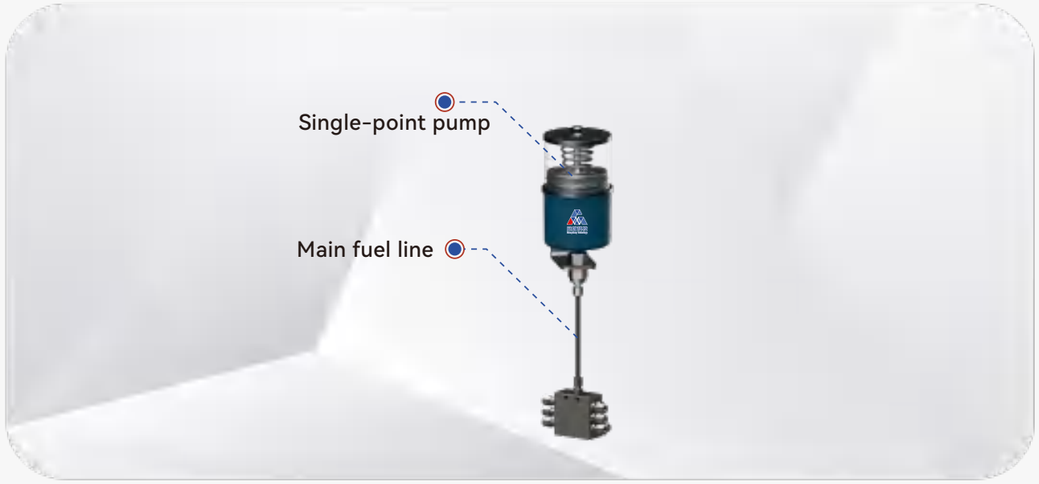
LONG-LIFE DESIGN

The pump core material and fitting precision are industry-leading, resulting in a longer service life.

INTELLIGENT

Monitor system pressure, liquid level, system blockages and motor operating status in real time.

SINGLE-POINT PUMP LUBRICATION SYSTEM



Principle of operation: Operating according to the pre-set procedure, when the standby countdown ends, the lubrication pump starts up. A removable lithium-ion battery powers the motor, driving the plunger in a reciprocating motion to deliver oil and grease over long distances. When the operational countdown ends, the pump stops, the lubrication process concludes, and the system enters the next operating cycle.

HIGH-PRESSURE WORK

Plunger pump design, operating pressure 4 MPa.

COMPACT AND PORTABLE

It comes with its own battery, and the grease reservoir can be refilled, so no external power supply is required.

HIGH-PRECISION FIT

An external distributor can be connected to supply oil to multiple points.

ADJUSTABLE CYCLE

Available in 1/3/6/12/24-month cycles to meet a variety of lubrication requirements.

A VARIETY OF CAPACITIES

Available in 125mL, 250mL and 500mL sizes.

ZCH7X STIRRING ROD HIGH PRESSURE PISTON PUMP

The ZCH7X series plunger pumps comprise a motor assembly, a pump core assembly, a safety valve assembly, an agitator assembly, an eccentric wheel assembly and a reservoir assembly.

The motor is controlled by a controller; the drive shaft drives the eccentric wheel, which in turn drives the plunger piston rod to move back and forth, pumping the grease. The agitator continuously stirs the grease through a 360° rotation, ensuring that the plungers do not run dry. The reservoir is made of transparent PC material, allowing easy observation of the oil level and the operating status of the lubrication pump.

This pump can drive up to four plungers, with a pumping pressure of up to 35 MPa.



Advantages and Features

1、DC permanent magnet gear motors deliver high torque and low current consumption, with excellent low-temperature performance and high pumping pressure;

2、The transparent reservoir is made from composite materials, offering high compatibility with greases; this minimises faults caused by separation between the solenoid valve and the grease, ensuring a long service life for the pump core;

3、Real-time monitoring of pressure, fluid level, temperature and the distributor, with intelligent anomaly detection, low-grease warnings and adaptive grease regulation;

4、The high-strength cast aluminium pump housing is stable and reliable; the innovative pump core design enhances pressure, whilst the superior materials and precision ensure greater durability.

Technical Specifications

Model	Volume	Control mode	Engine capacity	Output pressure	Power	Noise at work	Suitable fats and oils	Operating temperature	Protection rating
ZCH72	2L	Built-in (ECU LCD controller)	2mL/min	30MPa	30W 72W	<45dB	NLGI 000-2	-40~70℃	IP67
ZCH75	4L								
ZCH76	6L		2.8mL/min						
ZCH78	8L		4mL/min						
ZCH710	10L		4.5mL/min						
ZCH712	12L		6mL/min						
ZCH715	15L								
ZCH720	20L								

ZCHGF1 HYDRAULIC LUBRICATION PUMP

The ZCHGF1 hydraulic pump combines a rotary-driven hydraulic motor with a reciprocating pump tube, converting the rotational motion of the hydraulic motor into the reciprocating motion of the pump tube to pump grease. It utilises a high-efficiency hydraulic motor characterised by high torque and low noise, ensuring stable grease delivery even under high pressure. An integrated flow control valve allows for flexible regulation of the pump's flow rate and output pressure.



Advantages and Features

1、It utilises a hydraulic drive system, which provides stable power and is safe and reliable, enabling the long-distance pumping of high-viscosity greases;

2、The flow rate reaches up to 360 mL/min and can be continuously and infinitely adjusted, allowing customers to set the flow rate to suit their requirements;

3、The pump core is made from high-strength alloy steel that has undergone a special heat treatment process, offering improved wear resistance and a longer service life, thereby reducing equipment maintenance costs;

4、The lubrication pump is compact in design, equipped with high and low liquid level detection and warning systems, and is easy to maintain on a daily basis;

5、A tried-and-tested sealing design is employed to ensure a reliable seal in high-pressure environments;

6、All-metal construction, wide operating temperature range, vibration-resistant, shock-resistant and rain-resistant; suitable for complex and harsh operating conditions.

Technical Specifications

Name	Parameters
Maximum inlet pressure of hydraulic oil	200Bar
Maximum inlet flow rate of hydraulic oil	16L/min
Operating pressure of hydraulic oil	2.5MPa-3.2MPa
Maximum operating pressure	30MPa
Operating temperature	-30℃ ~ 65℃
Flow rate	120-360ml/min
Number of outlets	1 unit
Suitable lubricants	NLGI 0~ 2
Tank capacity	30L、40L、50L
Outlet specifications	3/4NPTF
Protection rating	IP65
Drive type	Hydraulic drive

ZCHGF2 ELECTRIC LUBRICATION PUMP

The ZCHGF2 electric pump utilises a motor-driven control system, whereby the displacement of the lubrication pump is linearly proportional to the motor speed; this allows for stepless adjustment of the lubrication pump's flow rate by regulating the motor speed. It employs a high-efficiency brushless motor, delivering high output torque and high pumping pressure, enabling the long-distance delivery of high-viscosity greases. The lubrication pump features an all-metal construction, making it vibration-resistant, impact-resistant and weatherproof, and suitable for complex and harsh operating conditions.



Advantages and Features

1、Equipped with a high-efficiency brushless motor, it delivers high torque and high pumping pressure, enabling the long-distance pumping of high-viscosity greases;

2、The motor speed is adjustable, enabling continuous, stepless regulation of the pump flow rate, making it easy for customers to match the flow rate to their requirements;

3、The pump core is made from high-strength alloy steel that has undergone special heat treatment, offering superior wear resistance and a longer service life, thereby reducing equipment maintenance costs;

4、Easy maintenance: Installation requires only a power supply connection; the unit is equipped with high and low liquid level detection and early warning systems, making installation and maintenance straightforward;

5、A tried-and-tested sealing design is employed to ensure a reliable seal in high-pressure environments;

6、All-metal construction, wide operating temperature range, vibration-resistant, shock-resistant and rain-resistant; suitable for complex and harsh operating conditions.

Technical Specifications

Name	Parameters
Maximum operating pressure	35MPa
Operating temperature	-40℃ ~ 65℃
Adjustable flow rate	25-120ml/min
Number of outlets	1 unit
Suitable oils	NLGI 0 ~ 2
Oil drum capacity	30L、40L、50L
Oil outlet specifications	1/2 NPTF
Protection rating	IP65
Drive type	Motor drive

ZCHSX SINGLE-POINT PUMP

The single-point automatic lubrication pump is a plunger pump powered by a removable and replaceable lithium-ion battery. The lithium-ion battery powers the motor, which in turn drives the plunger to pump the oil.

The oil reservoir is made of transparent PC material, making it easy to monitor the oil level and the pump's operating status.

The pumping pressure can reach 4 MPa.



Advantages and Features

1、Simple and convenient, with a removable and replaceable lithium-ion battery; no external power supply required; the grease reservoir can be refilled;

2、Features a plunger-type pumping mechanism, delivering a maximum operating pressure of 4 MPa;

3、Can be connected to an external distributor for multi-point lubrication, ensuring high precision;

4、The lubrication cycle is adjustable, with preset intervals of 1, 3, 6, 12 or 24 months to meet various lubrication requirements;

5、Available in three different capacities: 125 ml, 250 ml and 500 ml.

Technical Specifications

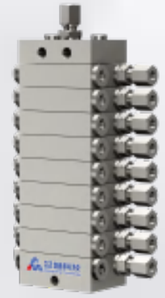
Name	Parameters	Name	Parameters
Control mode	Built-in controller	Oil outlet fitting	R3/8
Tank capacity	125ml/250ml/500ml	Filling port	Pressure-fed oil cup
Pump core flow rate	0.2ml/r	Suitable lubricants	NLGI 00-2
Output pressure	4MPa max	Operating temperature	-20℃~60℃
Rotational speed	8r/min	Protection rating	IP65
Battery voltage	3.6V(Optional external 24 V DC supply)	Product dimensions	185.5*98（mm） （125ml）
Adjustment cycle	1/3/6/12/24 Month		210.5*98（mm） （250ml）
Power supply type	Lithium-ion battery		250.5*98（mm） （500ml）

ZCHIP PROGRESSIVE DISTRIBUTOR

A disc-type distributor comprises an inlet fitting, a lead disc, intermediate discs, a tail disc, an outlet fitting, a plug, O-rings, screws and a hinge assembly.

Disc-type progressive distributors are suitable for progressive lubrication systems that require continuous oil supply via the main oil line.

It is a lubrication component that meters grease and dispenses it precisely in sequence according to a specific order.



Advantages and Features

1、Precise metering and sequential lubrication;

2、Compact, monobloc design with high-pressure resistance;

3、Adjacent, interconnected oil outlets allowing for flexible and varied flow rate ratios;

4、Built-in outlet check valve;

5、Visible mechanical circulation indicator;

6、Lubrication cycle counter (optional).

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable for use with fats and oils
-40℃~80℃	-55℃~80℃	35MPa	0.08mL/cy 0.16mL/cy 0.24mL/cy 0.32mL/cy 0.64mL/cy 1.28mL/cy (Adjacent plots may be merged)	Up to NLGI 2

BLOCK-TYPE AINGLE-LINE DISTRIBUTOR

A block-type single-line distributor comprises a distributor body, a spool, an indicator rod, plugs and other components. The single-line distributor is suitable for lubrication systems with periodic oil supply via the main oil line. When pressure is applied to the main oil line, it discharges the grease from the chamber whilst simultaneously replenishing the grease reservoir for the next cycle; when pressure is relieved from the main oil line, the spring returns the spool to its original position, thereby storing grease for the next discharge cycle.



Advantages and Features

1、Adjustable flow rate;

2、Precise metering, with independent oil supply to each lubrication point;

3、Pressure monitoring at the end of the main oil line, with safety monitoring of the system status;

4、Parallel configuration of each oil outlet, with independent oil supply;

5、Integrated design, compact and lightweight, easy to install and maintain;

6、Visible mechanical oil discharge indicator; integrated design, compact and lightweight, easy to install and maintain, with an IP67 protection rating.

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable fats and oils
-40℃~80℃	-55℃~80℃	35MPa	0.2mL/cy 0.4mL/cy 0.6mL/cy	NLGI 0-2

BLOCK-TYPE PROGRESSIVE DISTRIBUTOR

A block-type distributor comprises an inlet fitting, a distributor valve body, an outlet fitting and an outlet plug.

A progressive distributor is suitable for progressive lubrication systems that require continuous oil supply via the main oil line. It is a lubrication component that meters the grease and dispenses it precisely in sequence.



Advantages and Features

1、Integral structural design, capable of withstanding high pressure;

2、Compact and lightweight, requiring minimal installation space;

3、Precise metering, continuous oil discharge and high efficiency;

4、Mechanical indicator rod, blockage sensor and system status safety monitoring; protection rating: IP67.

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable fats and oils
-40℃~80℃	-55℃~80℃	35MPa	0.2mL/cy	Up to NLGI 2

ZCH316 MANUAL LUBRICATION PUMP

The ZCH316 manual lubrication pump is a manual high-pressure grease pump suitable for use in progressive lubrication systems.



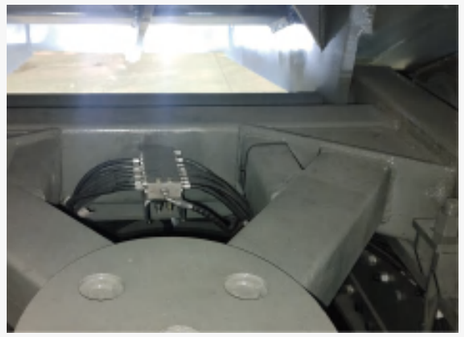
Technical Specifications

Name	Parameter
Maximum operating pressure	31.5Mpa
Number of oil outlets	1
Engine capacity	2mL/cy
Volume	1.6L
Operating temperature	-45℃~70℃
Protection rating	IP65

THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON MINING TRUCKS










THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN EXCAVATORS

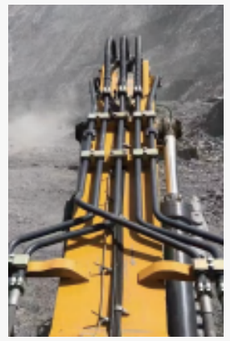




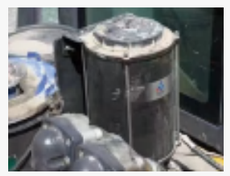


















THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON LOADERS







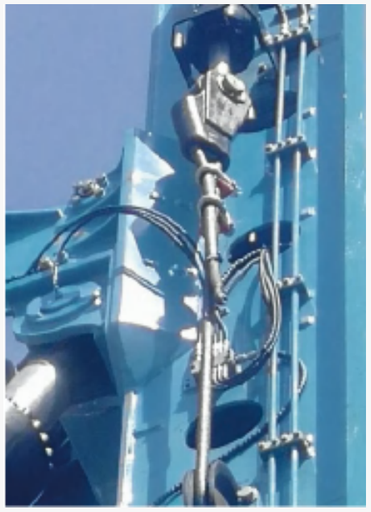




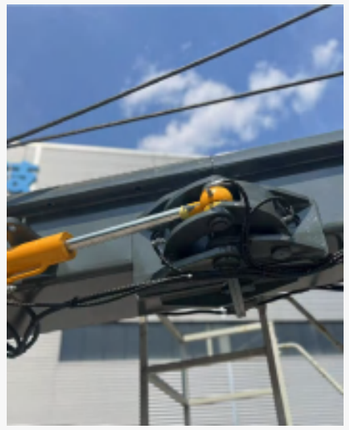


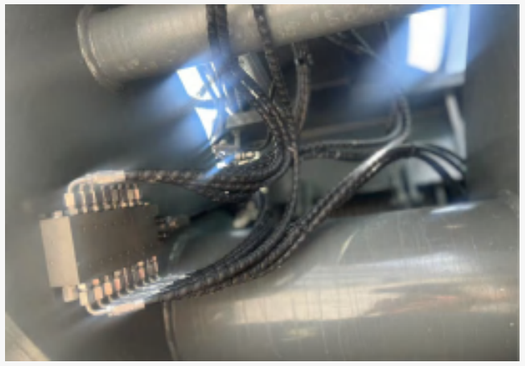


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON ROTARY DRILLING RIGS





THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN CRANES





THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN CRUSHERS



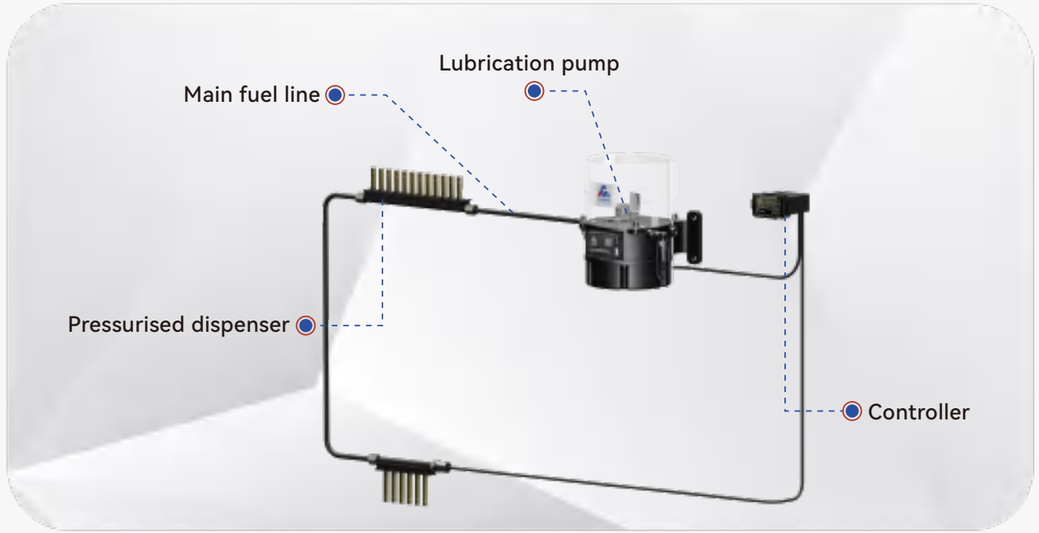




Commercial Vehicles

商用车篇

PRESSURISED LUBRICATION SYSTEM



Principle of operation: When operating according to the preset programme, upon completion of the idle countdown, the grease supply unit receives a start command from the controller; the motor then drives the gear pump, the relief valve opens, and high-pressure grease is delivered through the main oil pipe to the distributor, where it is precisely metered before being dispensed to the various lubrication points.

HIGH PRESSURE

With a maximum high-pressure output of 8 MPa, the grease is resistant to loss even under high-temperature conditions and performs reliably in extremely cold conditions.

CONNECTED VEHICLES

It comes with a CAN communication module as standard, allowing connection to a telematics app for real-time monitoring of lubrication status.

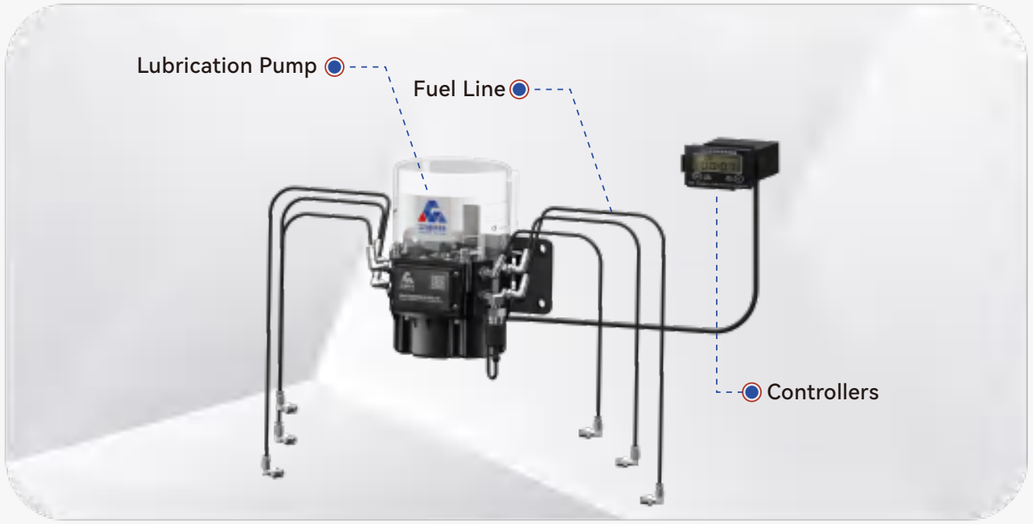
HIGH PROTECTION

IP67 protection rating, enhancing the product's environmental adaptability.

HIGH STABILITY

Exceeds road vehicle electromagnetic compatibility standards; does not interfere with other equip- ment and is not affected by interference from other equipment.

MULTI-LINE PLUNGER LUBRICATION SYSTEM



Principle of operation: Operating in accordance with the pre-set procedure, when the standby countdown ends, the lubrication pump starts operation. Grease is delivered via a brushless synchronous motor, which drives the drive shaft and eccentric wheel, thereby causing the piston rod of the plunger pump core to move back and forth, enabling point-to-point grease injection between the pump core and the lubrication point. When the operational countdown ends, the pump stops operating, the grease supply process concludes, and the system enters the next operating cycle.

HIGH-PERFORMANCE ADAPTATION

Capable of delivering high-pressure output of 15 MPa, it remains unfazed by extreme cold, ensuring the vehicle continues to operate normally in frigid conditions.

HIGH INTEGRATION

Compact, lightweight and quiet (inaudible to the human ear), making it easy to install and saving space.

NO DISTRIBUTOR REQUIRED

Grease is injected directly from the pump core to the lubrication points, eliminating the need for a distributor and main supply line.

HIGH STABILITY

Exceeds road vehicle electromagnetic compatibility standards; does not interfere with other equip- ment and is not affected by interference from other equipment.

ZCH82 GEAR PUMP

The ZCH82 lubrication pump is driven by an electric motor, which operates a gear pump; when the relief valve opens, grease is deliv- ered via the main oil line to the distributor, where it is precisely metered before being distributed to the various lubrication points via the branch lines. The lubrication pump features high pressure, a high level of protection, CAN communication as standard, and has passed EMC testing.



Advantages and Features

1、High pressure: with a maximum pressure of 8 MPa, it can transport oils and fats over long distances;

2、High protection: IP67 rating, so you don't have to worry about rainy weather;

3、Standard CAN communication: Can be connected to a telematics app for real-time monitoring of lubrication status;

4、LCD controller: Both the built-in and external controllers feature LCD screens, making it easy to monitor and adjust settings;

5、Patented venting mechanism: Patented venting knob that allows air to flow inwards, easily resolving venting issues following oil starvation and cavitation in the oil pump (optional);

6、No electromagnetic interference / high immunity to interference: Fully complies with EMC requirements such as GB/T 17626.2 'Electromagnetic compatibility – Testing and measurement techniques – Electrostatic discharge immunity test', causing no interfer- ence to other electrical equipment and being immune to electromagnetic interference.

Technical Specifications

Model	Control mode	Capacity	Height	Output pressure	Power	Noise at work	Suitable fats and oils	Operating temperature	Protection rating
ZCH82-L	Built-in Basic Version (ECU LCD Controller)	2L	248(mm)	4.5MPa	30W	< 50dB	NLGI-0、00、000	-40~80℃	IP67
ZCH82	Built-in Standard Version (ECU LCD Controller)								
ZCH82-W	External Standard Version (ECU LCD Controller)								
ZCH82-H	Built-in High-Spec Version (ECU LCD Controller)			8MPa					
ZCH82-HW	External High-Spec Version (ECU LCD Controller)								

ZCH91 MULTI-LINE PISTON PUMP

The ZCH91 lubrication pump utilises a brushless synchronous motor to drive the drive shaft and eccentric wheel, which in turn drives the piston rod of the plunger pump core to move back and forth, enabling the pump core to perform the processes of suction and discharge of lubricant. The lubrication pump is compact, lightweight and capable of high pressure; it features a long motor service life, point-to-point lubrication and a high level of protection. It comes with CAN communication as standard and is EMC-compliant.



Advantages and Features

1、Compact in size, with dimensions of 182 × 162 × 203 mm, it is 15% to 20% smaller than traditional oil pumps in the industry; it is easy to maintain and install, and takes up minimal space;

2、Lightweight, weighing just 3.3 kg, the pump is 20% to 30% lighter than traditional oil pumps in the industry; its lightweight design contributes to energy savings and reduced emissions;

3、High pressure: maximum working pressure of 15 MPa, capable of conveying grease over a distance of 15 metres;

4、Stable performance in both high and low temperatures: High-voltage output ensures reliable operation even in extreme cold, maintaining normal vehicle operations in frigid conditions;

5、The system features a simple design, with the pump connected directly to the lubrication points for point-to-point lubrication, eliminating the need for a distributor. It incorporates an integrated controller and utilises standard CAN commu- nication for monitoring;

6、Low noise levels; features a brushless motor (with a design life of 12 years); operating noise ≤ 30 dB, making it inaudible to the human ear;

7、No electromagnetic interference / high immunity to interference: Fully complies with EMC requirements such as GB/T17626.2 'Electromagnetic compatibility – Testing and measurement techniques – Electrostatic discharge immunity test', causing no interference to other electrical equipment and being immune to electromagnetic interference.

Technical Specifications

Model	Control mode	Capacity	Height	Output pressure	Power	Noise at work	Suitable fats and oils	Operating temperature	Number of oil ports	Protection rating
ZCH91	Built-in (LED display monitor)	1L	203.5(mm)	10MPa	10W	< 30dB	NLGI-2、1、0、00	-40~80℃	1~12(units)	IP67
ZCH91-P	External (ECU LCD controller)			12MPa						
ZCH91-H	Built-in (ECU LCD controller)									
ZCH91-M	Internal/External		228.5(mm)	10MPa					1~19(units)	

PRESSURISED DISPENSER

The pressure-fed dispenser is available in four different grease capacity specifications, delivering a metered amount of grease to meet the varying lubrication requirements of different friction pairs. It is lightweight and easy to install.



Advantages and Features

1、Precise metering and independent lubrication;
2、Compact design;
3、A wide range of displacement capacities;
4、End-of-stroke pressure detection;
5、Easy to install and maintain.

Technical Specifications

Name	Parameters
Suitable lubricants	NLGI-000、00、0
Displacement	0.1、0.13、0.2、0.4ml/cy
Operating temperature	-40~70℃
Storage temperature	-55~80℃
Max. pressure	4.5~8MPa

AUTOMATIC LUBRICATION CONTROLLER

The controller serves as the control centre for the entire lubrication system. It dynamically displays operational parameters such as running and stand-by countdowns, fault codes and the number of operating cycles, and is equipped with oil pressure monitoring and fault alarm functions. Controllers are available in both built-in and external versions; the built-in controller is integrated into the lubrication pump, whilst the external controller can be installed on the equipment in a location convenient for operators.



Advantages and Features

1、 LCD display, which dynamically shows the operating status of the equipment and offers a high level of intelli-gence;

2、 Adjustable operating and idle durations: Customers can manually set lubrication intervals according to thevehicle’s operating conditions and status;

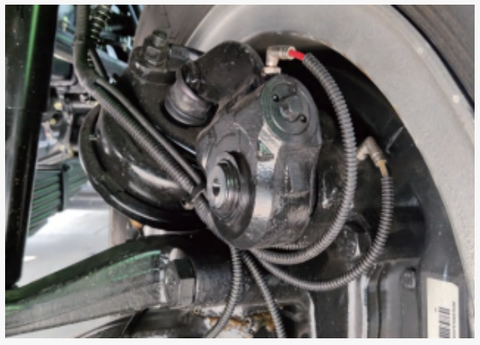
3、 Intelligent temperature control technology: temperature thresholds can be set between 0 and -40°C to meet the requirements of different lubricants in extremely cold regions;

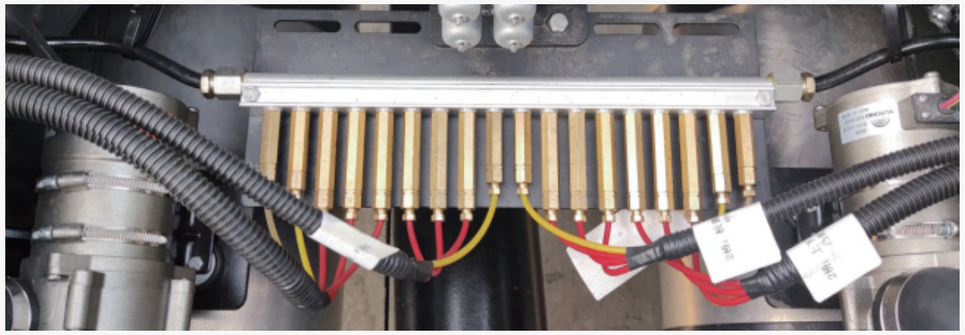
4、 Using CAN bus communication for control, control and display data can be transmitted to the entire vehicle, thereby supporting vehicle-to-everything communication.

THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON DUMP TRUCKS





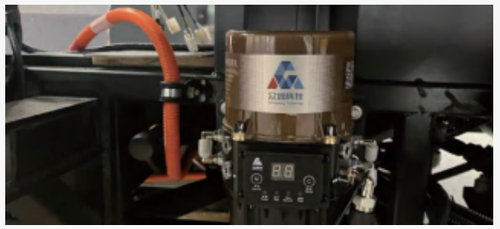




THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN COACHES









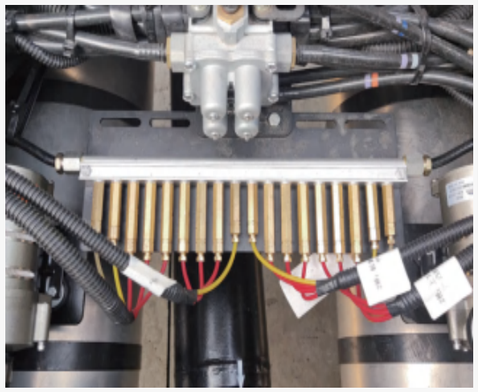


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN DUMP TRUCKS







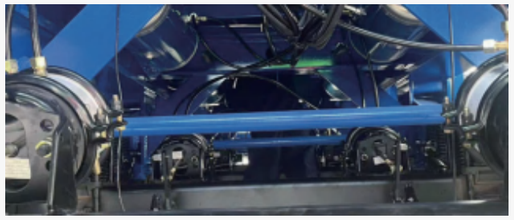


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON TIPPER TRUCKS





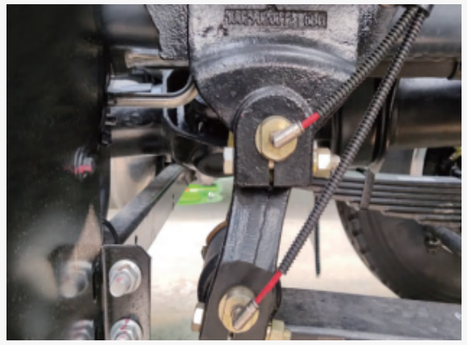




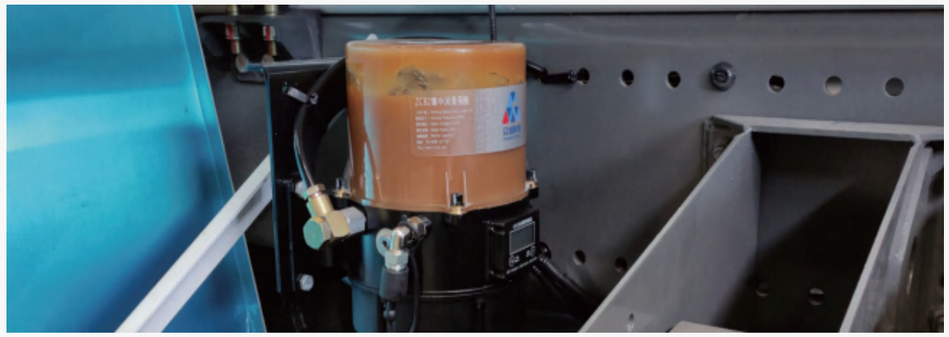


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN MIXER TRUCKS









THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN REFUSECOLLECTION VEHICLES





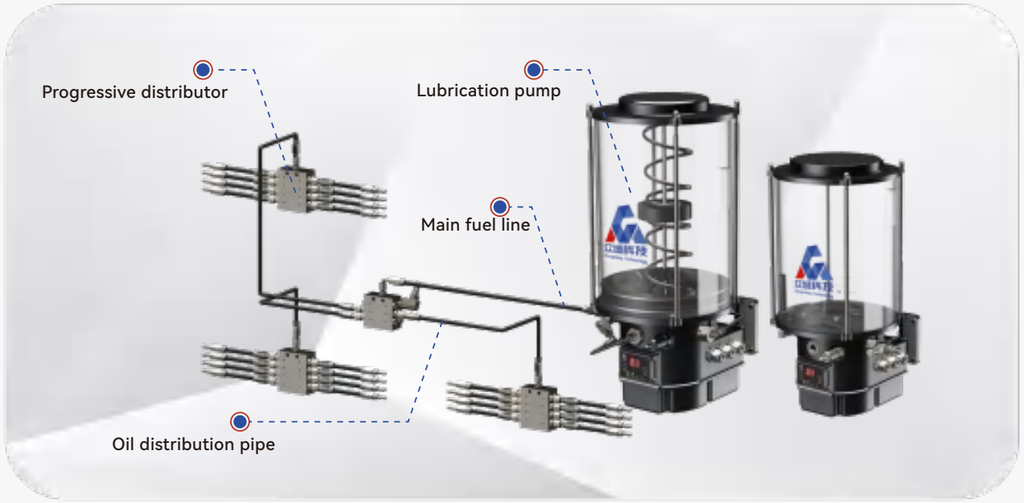




Wind Power Chapter

风电篇

PRESSURISED LUBRICATION SYSTEM



Principle of operation: The system operates according to the pre-set procedure. When the idle countdown ends, the lubrication pump starts operating; grease is delivered via the main pipeline to the progressive distributor, and is then metered by the distributor to each lubrication point. When the operational countdown ends, the pump stops operating, the grease supply process concludes, and the system enters the next operating cycle.

HIGH-PERFORMANCE ADAPTATION

Withstands extreme low temperatures of -40°C and delivers a high-pressure output of 30 MPa, meeting the requirements of high-altitude, cold regions.

INTELLIGENT MANAGEMENT

Integrated CAN module, enabling remote monitoring.

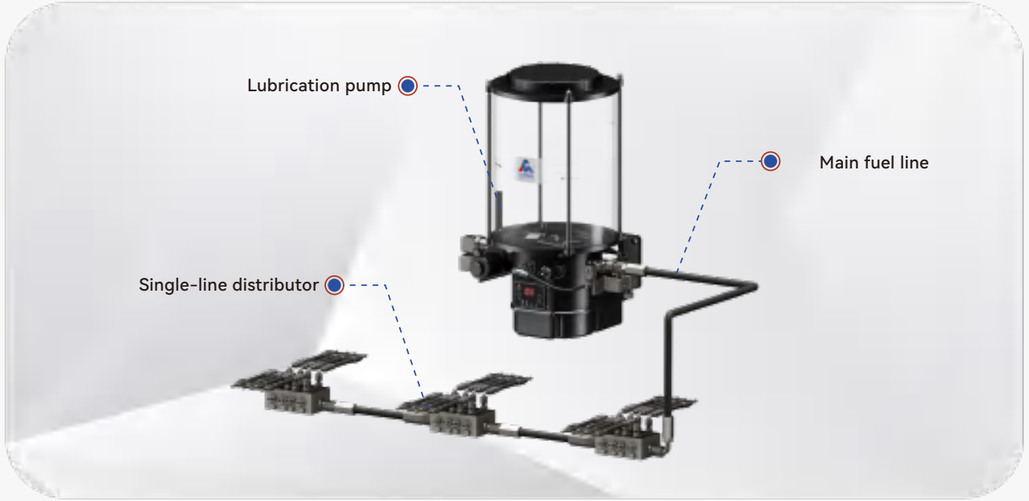
LONG-LIFE DESIGN

It utilises a DC permanent magnet gear motor, designed to meet the 25-year service life required for wind power applications; the patented agitator design prevents cavitation and ensures a stable supply of grease. With an IP67 protection rating, it offers outstanding resistance to water and dust.

ENERGY SAVING AND ENVIRONMENTAL PROTECTION

Metered oil dispensing reduces oil wastage (saving 80% of the amount used) and minimises environmental pollution.

SINGLE-LINE LUBRICATION SYSTEM



Principle of operation: Operating according to the preset programme, when the standby countdown ends, the lubrication pump starts up; grease is delivered through the main pipeline to the single-line distributor, and the system pressure gradually rises. The grease is then metered by the single-line distributor to each lubrication point. When the oil pressure at the end point reaches the sensor's actuation pressure, a pressure signal is fed back to the monitor. The lubrication pump stops operating after 1 minute, at which point the main pipeline is depressurised, and the process of metered oil storage and supply by the single-line distributor is completed; the system then enters the next operating cycle.

INDEPENDENT LUBRICATION

The oil injectors in each branch circuit operate independently; a failure in one branch circuit does not affect the normal operation of the other branch circuits.

LOWER COSTS

A single-line system with a parallel configuration, offering easier assembly and reduced maintenance costs.

LONG-LIFE DESIGN

The pump core material and fitting precision are industry-leading, resulting in a longer service life.

INTELLIGENT

Monitor system pressure, liquid level, system blockages and motor operating status in real time.

ZCH5X LUBRICATION PUMP

The ZCH5X series plunger pump comprises a reduced-speed DC motor, a pump core assembly, a safety valve assembly, an eccentric wheel assembly and a reservoir assembly. The motor is controlled by a controller; the drive shaft drives the eccentric wheel, which in turn drives the plunger piston rod to move back and forth, thereby pumping grease.



Advantages and Features

1、Excellent performance: utilises a DC permanent magnet gear motor, delivering high torque and low current; excellent low-temperature performance, stable flow rate and enhanced reliability; low noise, with operating noise levels below 45 decibels;

2、Stable and reliable: the pump core is made from high-strength alloy steel that has undergone special heat treatment; optimised fitting precision ensures improved wear resistance and a longer service life; the oil pump housing is made from high-strength aluminium alloy, offering low weight and high strength; the solenoid valve and grease chamber operate separately, resulting in a low failure rate;

3、The lubrication pump has an IP67 protection rating; its corrosion resistance meets the requirements of both onshore and offshore wind power environments.

Technical Specifications

Model	Control mode	Capacity	Pump core oil output	Output pressure	Power	Noise at work	Suitable fats and oils	Operating temperature	Protection rating
ZCH55	Built-in (LED display monitor)	4L	2ml/min 2.8ml/min 4ml/min 4.5ml/min 6ml/min	30Mpa	30W 72W	< 45dB	NLGI 000-2	-40~70℃	IP67
ZCH58		8L							
ZCH515		15L							
ZCH520		20L							
ZCH530		30L							

WIND POWER LUBRICATION PINION

The lubricated pinion consists of gear segments, a shaft, a seal, a retaining ring and fasteners.
The gear's modular design, utilising a segmented assembly structure, allows for flexible selection of gear width; the gear is designed to dispense grease in a specific direction via its internal structure.



Advantages and Features

1、 The base material is thermoplastic polyurethane rubber (TPU), which is lightweight and highly wear-resistant. It offers excellent overall performance, including high strength, high toughness, wear resistance and oil resistance, and is easy to process;

2、The plate-type structure and modular design allow adaptation to tooth surfaces of varying widths;

3、The tooth surface contact features oil reservoirs, enabling directional oil supply without grease splatter, resulting in more precise and efficient lubrication;

4、Multi-layer oil discharge from the tooth surface ensures a wide lubrication area and more thorough lubrication.

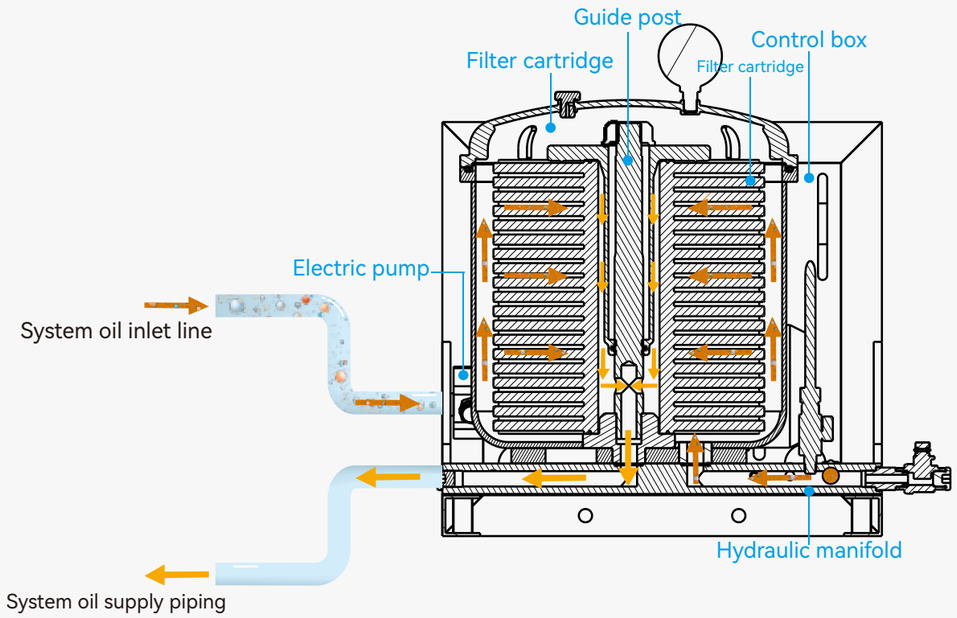
Technical Specifications

	Material	Operating temperature	Corrosion resistance class	Gear module	Gear width / Mounting bracket
Technical Specifications	Thermoplastic polyurethane rubber (TPU)	-45℃~80℃	C4H	8/10/12/14/16/20 /22/24/26	Tailored to customer requirements

ZL912PRO+ PRECISION FILTRATION SYSTEMS



Principle of operation: The control box controls the operation of the motor pump, which pumps gearbox oil through the system's inlet pipe to the oil manifold. From there, the oil flows through the manifold's piping into the filter housing, where it is filtered by the filter element before being pressurised into the central bore of the filter element and flowing out through the guide pin at the centre of the filter housing. Finally, it is pumped back into the gearbox via the oil manifold and the system's outlet pipe.



Advantages and Features

1、High filtration precision (<3 μm), excellent performance, and suitable for a wide range of oil viscosities;

2、Bypass filtration design that does not affect equipment operation; the filter cartridge has a high dirt-holding capacity and excellent water absorption;

3、The integrated hydraulic circuit reduces potential points of failure, ensuring high system reliability, whilst enabling real-time monitoring and online detection of oil condition and equipment operation;

4、Compact and space-saving, it is easy to install and features an intelligent control and display system.

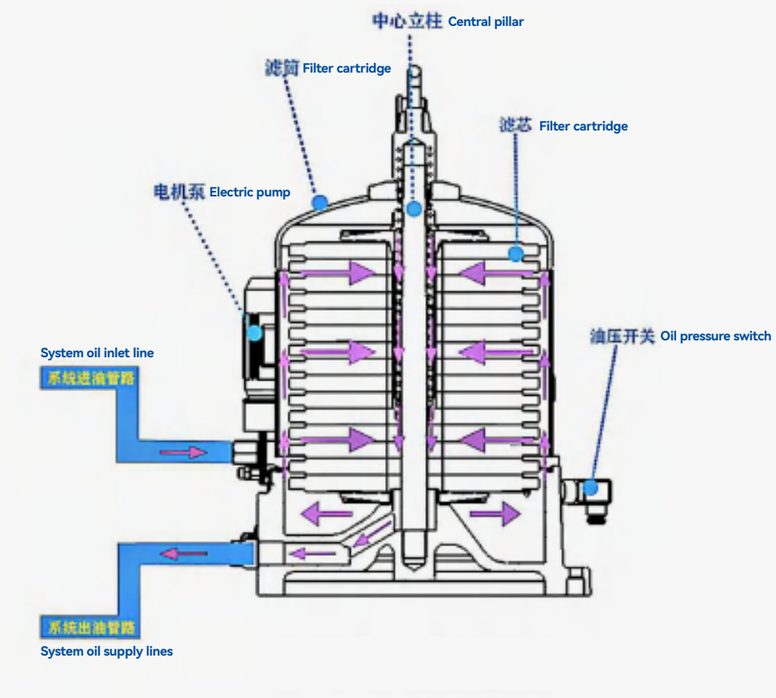
Technical Specifications

Name		Parameters
Basic Parameters	Filtration precision	3μm
	Rated flow rate	120L/h、240L/h
	Rated voltage and frequency	AC220V/AC380V、50Hz
	Design pressure	12bar
	Filter element replacement pressure	3bar
	Dimensions	502*430*430（mm）
	Contaminant holding capacity	4kg
	Water absorption capacity	2L
	Motor power	180W
	Operating temperature	0℃~70℃
	Storage temperature	-40℃~80℃
	Suitable viscosity range	≤320cst
Options Specifications	Overpressure protection	Digital signals
	Temperature protection	Analogue signals
	Oil monitoring	Contamination level, moisture content, abrasive particles, viscosity
	Communication interface	RS-485, CAN
	Communication protocol	MODBUS
	Flow meter	Pulse signals

ZL9XPRO PRECISION FILTRATION SYSTEMS



Principle of operation: The ZL9XPro series precision filtration system comprises a motorised pump, filter housing, filter cartridge, pressure switch, pressure gauge and pipework fittings. The motorised pump circulates the lubricating oil from the gearbox through the filtration system, filtering out contaminants such as insoluble particulates, oil degradation products and moisture, thereby improving oil quality, enhancing oil utilisation and extending the service life of the equipment, thus creating greater value for customers.



Advantages and Features

1、Online bypass filtration: does not affect equipment operation, improves power generation efficiency, whilst ensuring the performance and service life of the oil;

2、High filtration precision and efficiency: High-precision filter cartridges are used, with a filtration precision of 3 μm and high one-pass interception efficiency;

3、It has a high dirt-holding capacity and can handle a wide range of filter media, with a dirt-holding capacity 5–10 times that of the system's filtration capacity; it can filter not only metal particles and grinding debris, but also impurities such as water, oil degradation products and sludge in the oil;

4、Suitable for a wide range of oils; capable of filtering oils with viscosities ranging from 32 cSt to 320 cSt;

5、Easy to install, with a compact design and small footprint, making it convenient to fit.

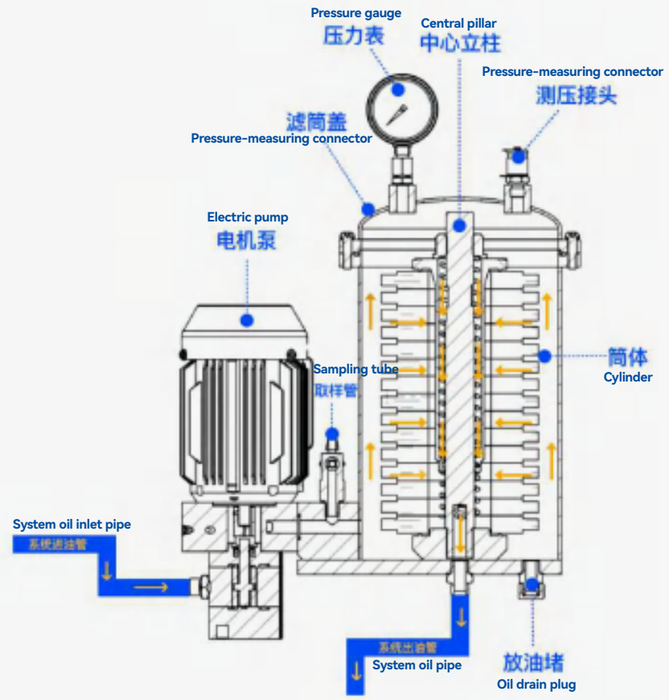
Technical Specifications

Name		Parameters
Basic Parameters	Filtration precision	3μm
	Rated flow rate	120L/h
	Rated voltage and frequency	AC380V、50Hz
	Design pressure	12bar
	Filter element replacement pressure	3bar
	Dimensions	522*427*572（mm）
	Contaminant holding capacity	4kg
	Water absorption capacity	2L
	Motor power	180W
	Operating temperature	0℃~70℃
	Storage temperature	-40℃~80℃
	Suitable viscosity range	≤320cst
Options Specifications	Overpressure protection	Digital signals
	Temperature protection	Analogue signals
	Oil monitoring	Contamination level, moisture content, abrasive particles, viscosity
	Communication interface	RS-485, CAN
	Communication protocol	MODBUS
	Flow meter	Pulse signals

ZL912MINI PRECISION FILTRATION SYSTEMS



Principle of operation: The control box controls the operation of the motor pump, which pumps gearbox oil through the system's inlet pipe to the oil manifold. From there, the oil flows through the manifold's piping into the filter housing. Inside the filter housing, the oil is filtered by the filter element, then pressurised into the central bore of the filter element and flows out of the filter housing via the guide pin at its centre. Finally, it is pumped back into the gearbox via the oil manifold and the system's outlet pipe.



Advantages and Features

1、High filtration precision (<3 μm), excellent performance, and suitable for a wide range of oil viscosities;

2、Bypass filtration design that does not affect equipment operation; the filter cartridge has a high dirt-holding capacity and excellent water absorption;

3、The integrated hydraulic circuit reduces potential points of failure, ensuring high system reliability, whilst enabling real-time monitoring of fluid condition and equipment operation;

4、It features a compact, space-saving design, is easy to install, and is equipped with an intelligent control and display system.

Technical Specifications

Name		Parameters
Basic Parameters	Filtration precision	3μm
	Rated flow rate	120L/h、240L/h
	Rated voltage and frequency	AC380V、50Hz
	Design pressure	12bar
	Filter element replacement pressure	3bar
	Dimensions	383*234*540（mm）
	Contaminant holding capacity	1.5kg
	Water absorption capacity	0.75L
	Motor power	180W
	Operating temperature	0℃~70℃
	Storage temperature	-40℃~80℃
	Suitable viscosity range	≤320cst
Options Specifications	Overpressure protection	Digital signals
	Temperature protection	Analogue signals
	Oil monitoring	Contamination level, moisture content, abrasive particles, viscosity
	Communication interface	RS-485, CAN
	Communication protocol	MODBUS
	Flow meter	Pulse signals

THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN THE AFTERMARKET FOR PRECISION FILTRATION





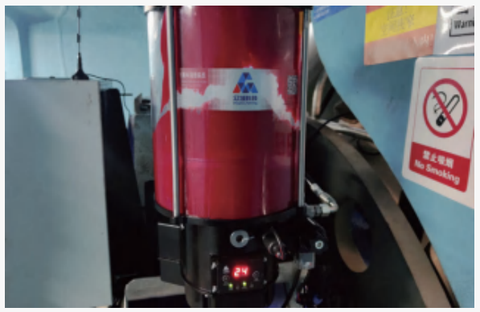


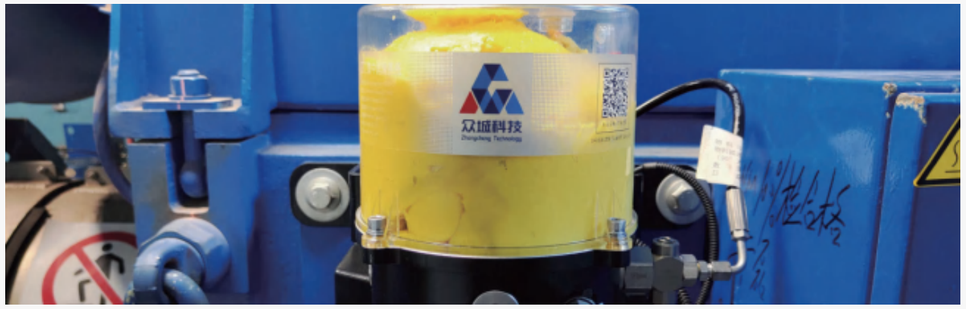


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS IN THE WIND POWER AFTERMARKET

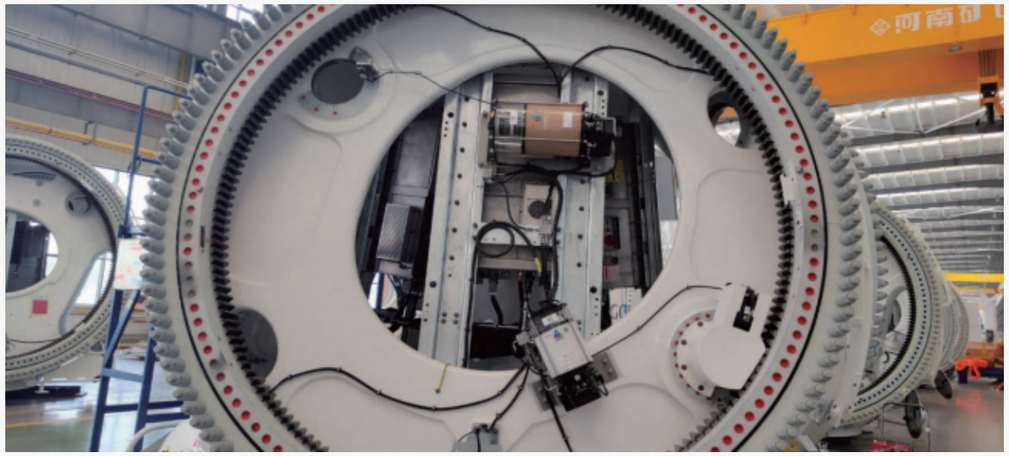


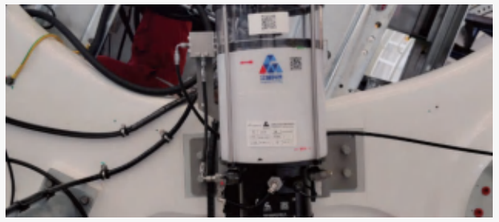


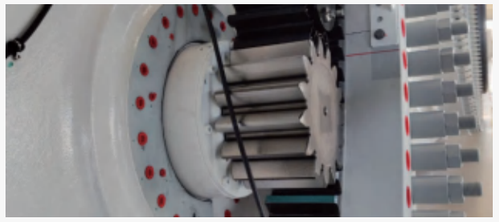




THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS AT GOLDWIND'S MAIN PLANT









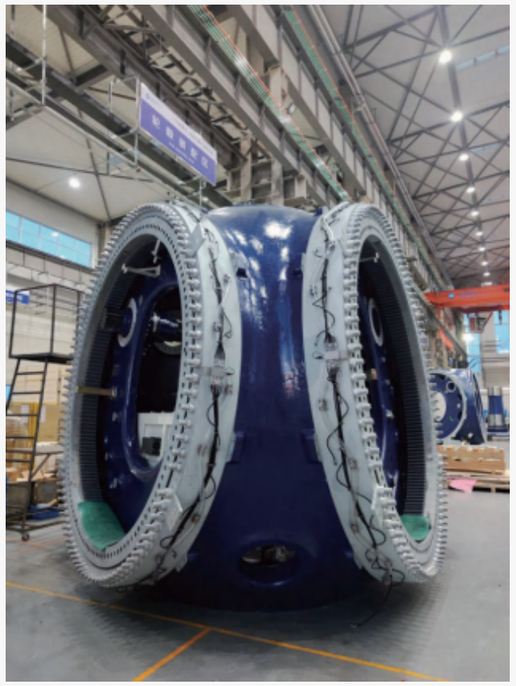


THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS AT THE MINGYANG MAIN PLANT





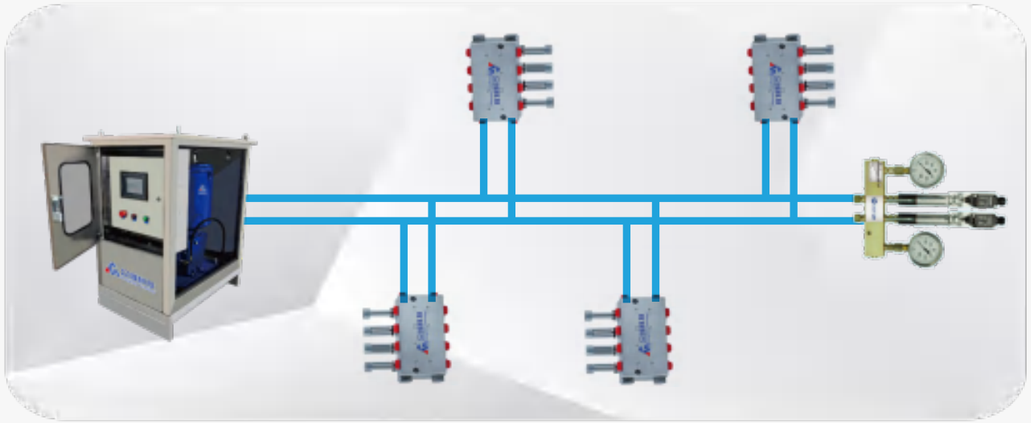




Port

港口篇

ZCHG7X INDUSTRIAL INTELLIGENT DUAL-LINE LUBRICATION SYSTEM



Principle of operation: The dual-line centralised lubrication system is controlled by a PLC, which activates the electric high-pressure lubrication pump to build up pressure via the two main oil lines, A and B. Initially, line A supplies oil, whilst line B is connected to the relief line. Once the pressure has risen to the set value, the outlet corresponding to line A completes the lubrication cycle. The system then switches the lines via a directional control valve, Line B begins to supply oil, whilst Line A is connected to the relief line. Once the pressure has risen to the set value, the outlet corresponding to Line A completes the lubrication process, marking the end of one lubrication cycle.

Advantages and Features

1、High pressure allows for the use of smaller lubrication pipes, thereby reducing pipeline costs;

2、Smaller lubrication lines, with a lower grease capacity, accelerate the flow of grease within the lines and reduce the likelihood of grease ageing;

3、Each lubrication point is supplied with oil independently, without interfering with one another, and the oil flow rate is simple to adjust;

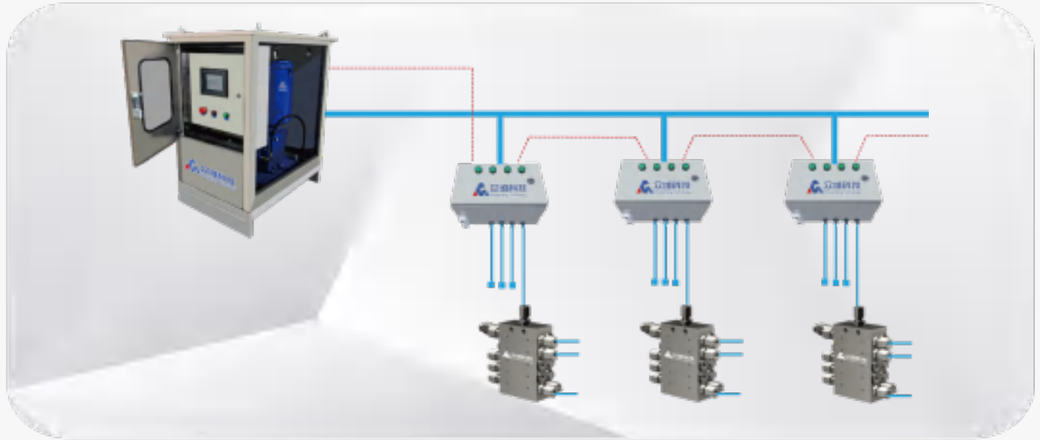
4、Computerised monitoring, multimedia voice alerts, independent voltage regulation, and stable operation;

5、Once installed, the flow rate can be easily adjusted; the system is equipped with computerised monitoring, multi-language support, audible and visual alarms, and independent pressure regulation, ensuring stable operation.

Technical Specifications

Nominal Pressure	Rated Displacement	Fuel Tank Capacity	Motor Power	Weight	Suitable Power Supply
40MPa	120ml/min、240ml/min 365ml/min	30L/60L/100L	0.37/0.75/1.5KW	208kg	AC380V/AC220V、50Hz

ZCHG7X INDUSTRIAL INTELLIGENT SINGLE-LINE LUBRICATION SYSTEM



Principle of operation: The intelligent centralised lubrication system is controlled by a PLC, which activates the electric high-pressure lubrication pump to build up pressure via one (or more) main oil lines. Once the pressure reaches the set value, the system opens the switches of the respective solenoid-operated oil dispensers in accordance with the instructions, supplying oil to each lubrication point according to the set parameters (flow rate). At the same time, the flow sensor monitors the flow; should a fault occur, an alarm is triggered immediately. Once oil supply to all lubrication points has been completed, the system enters a cycle waiting period; upon completion of this period, the next oil supply cycle begins.

Advantages and Features

1、The oil volume at each lubrication point is adjustable, offering a wide range and high precision;

2、Supports independent, metered oil supply to multiple points;

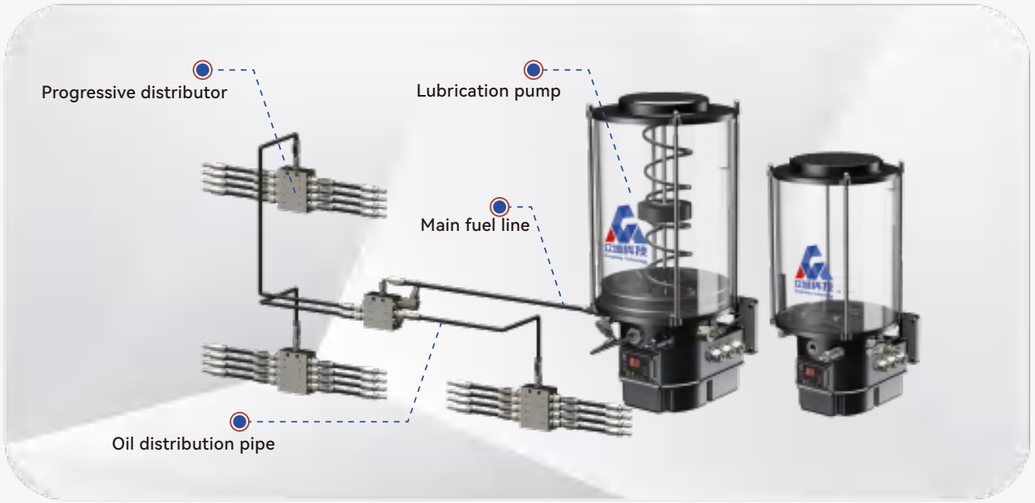
3、Real-time monitoring of pressure, liquid level, temperature and dispensers; intelligent anomaly detection; low-fat alerts; and adaptive fat adjustment;

4、Computerised monitoring, multimedia voice alerts, independent voltage regulation, and stable operation.

Technical Specifications

Nominal pressure	Rated Displacement	Fuel Tank Capacity	Motor Power	Weight	Suitable Power Supply
40MPa	120ml/min、240ml/min 365ml/min	30L/60L/100L	0.37/0.75/1.5KW	208kg	AC380V/AC220V、50Hz

PRESSURISED LUBRICATION SYSTEM



Principle of operation: The system operates according to the pre-set procedure. When the idle countdown ends, the lubrication pump starts operating; grease is delivered via the main pipeline to the progressive distributor, and is then metered by the distributor to each lubrication point. When the operational countdown ends, the pump stops operating, the grease supply process concludes, and the system enters the next operating cycle.

HIGH-PERFORMANCE ADAPTATION

Withstands extreme low temperatures of -40°C and delivers a high-pressure output of 30 MPa, meeting the requirements of high-altitude, cold regions.

INTELLIGENT MANAGEMENT

Integrated CAN module, enabling remote monitoring.

LONG-LIFE DESIGN

It utilises a DC permanent magnet gear motor, designed to meet the 25-year service life required for wind power applications; the patented agitator design prevents cavitation and ensures a stable supply of grease. With an IP67 protection rating, it offers outstanding resistance to water and dust.

ENERGY SAVING AND ENVIRONMENTAL PROTECTION

Metered oil dispensing reduces oil wastage (saving 80% of the amount used) and minimises environmental pollution.

WORKING PRINCIPLE OF THE ZCH7X PROGRESSIVE PLUNGER PUMP

The DC permanent magnet gear motor is controlled by a controller; the drive shaft drives the eccentric wheel, which in turn drives the piston rod of the plunger pump core to move back and forth, thereby pumping the grease. At the same time, the agitator assembly rotates through 360°, continuously stirring the grease to ensure that the pump core does not run dry.



Advantages and Features

1、The lubrication system is capable of continuous operation and is suitable for applications requiring large quantities of grease;

2、The system operates at a pressure of 30 MPa, meeting the requirements for long-distance grease delivery;

3、The distributor operates in a sequential manner, lubricating each lubrication point in turn to ensure that lubrication is carried out at the correct intervals and in the correct quantities;

4、The innovative internal design of the dispenser makes it less prone to blockages and ensures a longer service life;

5、The dispenser's flow rate is easily adjustable, meeting the requirements for a wide range of oil-to-lubricant ratios.

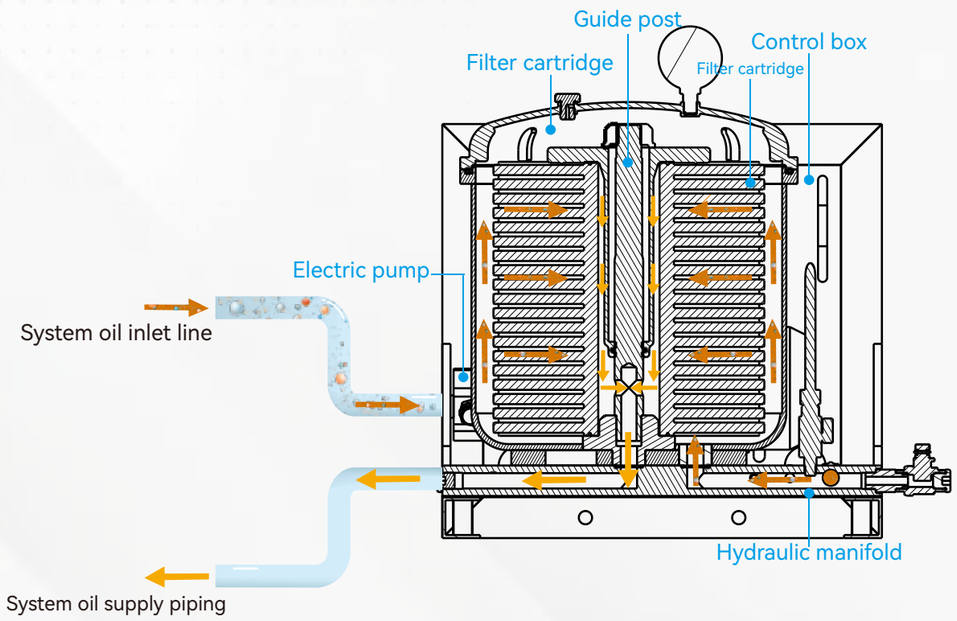
Technical Specifications

Model	Volume	Control Mode	Engine capacity	Output Pressure	Power	Noise at work	Suitable fats and oils	Operating Temperature	Protection Rating
ZCH72	2L	Built-in (ECU LCD controller)	2mL/min	30MPa	30W 72W	<45dB	NLGI 000-2	-40~70℃	IP67
ZCH75	4L								
ZCH76	6L		2.8mL/min						
ZCH78	8L		4mL/min						
ZCH710	10L		4.5mL/min						
ZCH712	12L		6mL/min						
ZCH715	15L								
ZCH720	20L								

ZL912PRO+PRECISION FILTRATION SYSTEMS



Principle of operation: The control box controls the operation of the motor pump, which pumps gearbox oil through the system's inlet pipe to the oil manifold. From there, the oil flows through the manifold's piping into the filter housing, where it is filtered by the filter element before being pressurised into the central bore of the filter element and flowing out through the guide pin at the centre of the filter housing. Finally, it is pumped back into the gearbox via the oil manifold and the system's outlet pipe.



Advantages and Features

1、High filtration precision (<3 μm), excellent performance, and suitable for a wide range of oil viscosities;

2、Bypass filtration design that does not affect equipment operation; the filter cartridge has a high dirt-holding capacity and excellent water absorption;

3、The integrated hydraulic circuit reduces potential points of failure, ensuring high system reliability, whilst enabling real-time monitoring and online detection of oil condition and equipment operation;

4、Compact and space-saving, it is easy to install and features an intelligent control and display system.

Technical Specifications

Name		Parameters
Basic Parameters	Filtration precision	3μm
	Rated flow rate	120L/h、240L/h
	Rated voltage and frequency	AC220V/AC380V、50Hz
	Design pressure	12bar
	Filter element replacement pressure	3bar
	Dimensions	502*430*430（mm）
	Contaminant holding capacity	4kg
	Water absorption capacity	2L
	Motor power	180W
	Operating temperature	0℃~70℃
	Storage temperature	-40℃~80℃
	Suitable viscosity range	≤320cst
Options Specifications	Overpressure protection	Digital signals
	Temperature protection	Analogue signals
	Oil monitoring	Contamination level, moisture content, abrasive particles, viscosity
	Communication interface	RS-485, CAN
	Communication protocol	MODBUS
	Flow meter	Pulse signals

ZCHGU01/02 ELECTRIC LUBRICATION PUMP

The ZCHGU01/02 is a high-pressure, high-capacity pump suitable for use in small or medium-sized dual-line or progressive systems.

Depending on the system configuration, these electric pumps can supply lubricant to lubrication points within a range of 50 metres, with a maximum operating pressure of 400 bar.



Advantages and Features

1、The pump core utilises a sliding-track fit, ensuring high reliability;

2、The lubrication pump has a moderate displacement, and the displacement of the pump core can be easily combined, making it highly versatile;

3、Configurable ultrasonic level monitoring.

Technical Specifications

Name	Parameters
Maximum operating pressure	Max. 40MPa
Displacement	800ml/h、1600ml/h、3200ml/h
Fuel tank capacity	10L、30L
Voltage	380VAC
Operating temperature	-20℃~70℃
Protection rating	IP65

ZCHG7X ELECTRIC LUBRICATION PUMP

The ZCHG7X series electric lubrication pumps are suitable for use as grease supply units in single-line and dual-line centralised lubrication systems for both dry and thin oils, where lubrication frequency is high, pipework lengths are considerable and lubrication points are densely distributed. They can also be fitted with a mobile trolley, rubber hoses, grease guns and cables to form a mobile electric lubrication pump unit, suitable for mobile grease lubrication of individual machines where lubrication frequency is low, the number of lubrication points is small, high grease delivery rates are required, and centralised lubrication is impractical.
This series of lubrication pumps utilises an electric high-pressure plunger design. The operating pressure can be freely adjusted within the nominal pressure range, and the pumps feature dual overload protection. The grease reservoir is fitted with an automatic grease level alarm; when equipped with an electrical control box, the lubrication pump enables fully automatic control of dual-line centralised lubrication systems and provides system monitoring.



Advantages and Features

1、High pressure allows for the use of smaller lubrication pipes, thereby reducing pipeline costs;

2、Smaller lubrication lines, with a lower grease capacity, accelerate the flow of grease within the lines and reduce the likelihood of grease ageing;

3、Each lubrication point is supplied with oil independently, without interfering with one another, and the oil flow rate is simple to adjust;

4、Computerised monitoring, multimedia voice alerts, independent voltage regulation, and stable operation;

5、Once installed, the flow rate can be easily adjusted; the system is equipped with computerised monitoring, multi-language support, audible and visual alarms, and independent pressure regulation, ensuring stable operation.

Technical Specifications

Name	Parameters
Maximum operating pressure	Max. 40MPa
Displacement	120mL/min、240mL/min、 365mL/min
Fuel tank capacity	30L、60L
Voltage	380VAC
Operating temperature	-20℃~80℃
Protection rating	IP65

ZCHGU08/14/24 ELECTRIC LUBRICATION PUMP

The ZCHGU08/14/24 pumps were originally designed for use in dual-line systems or as oil supply pumps, with a maximum operating pressure of 400 bar (5,800 psi). Depending on the system configuration, these electric pumps can supply lubricant to lubrication points within a range of 120 metres or more.

The standard configuration of the ZCHGU08/14/24 includes a pressure-reducing valve, a non-return valve, a lubricant filter and a pressure gauge. It offers robust performance and, thanks to the integrated agitator, operates effectively within a temperature range of −20 °C to +80 °C (−49 °F to +176 °F).



Advantages and Features

1、The pump core utilises a sliding-track fit, ensuring high reliability;

2、The product has a well-designed structure and is easy to maintain;

3、Available in three engine capacities;

4、Configurable ultrasonic level monitoring;

5、Built-in lubricating oil filter.

Technical Specifications

Name	Parameters
Maximum operating pressure	Max. 40MPa
Displacement	ZCHGU08 8000ml/h、ZCHGU14 14000ml/h、ZCHGU24 24000ml/h
Fuel tank capacity	40L、100L
Voltage	380VAC
Operating temperature	-20℃~80℃
Protection rating	IP65

ZCHILS PUMP STATION

The ZCHILS intelligent lubrication pump station is a key piece of equipment in the field of industrial equipment lubrication management. By integrating the Internet of Things, artificial intelligence and automated control technologies, it enables precise monitoring and intelligent regulation of the equipment lubrication process.

Typically, depending on the lubrication requirements at the customer's site, electric lubrication pumps of varying displacement are selected and integrated with the control system within a carbon steel or stainless steel cabinet to provide waterproof protection for the pump and other electrical components. The entire pump station is fitted with power input and output terminals.



Advantages and Features

1、By integrating the oil supply unit and the control unit, it is possible to integrate signals from the lubrication system, including information such as oil injection timing, system pressure and oil tank level;

2、It enables remote communication, transmitting signals to a remote control platform via wireless or wired means;

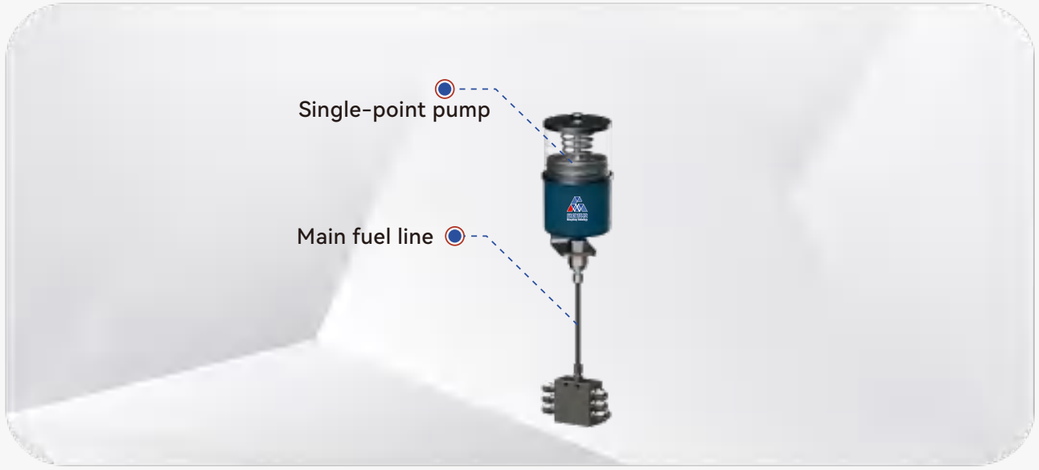
3、The oil tank capacity and lubrication pump displacement can be selected flexibly;

4、Comes with its own protective case, ensuring reliable protection.

Technical Specifications

Name	Parameters
Maximum operating pressure	Max. 40MPa
Displacement	120mL/min，240mL/min，365mL/min，8L/h，14L/h，24L/h，0.8L/h，1.6L/h，3.2L/h
Fuel tank capacity	30L、40L、60L、100L
Voltage	380VAC
Operating temperature	-20℃~80℃
Protection rating	IP65
Enclosure material	Powder-coated carbon steel / stainless steel
Electrical controls	Features a touch screen and PLC
Sensors	Pressure sensor, ultrasonic level sensor

SINGLE-POINT PUMP LUBRICATION SYSTEM



Principle of operation: Operating according to the pre-set procedure, when the standby countdown ends, the lubrication pump starts up. A removable lithium-ion battery powers the motor, driving the plunger in a reciprocating motion to deliver oil and grease over long distances. When the operational countdown ends, the pump stops, the lubrication process concludes, and the system enters the next operating cycle.

HIGH-PRESSURE WORK

Plunger pump design, operating pressure 4 MPa.

COMPACT AND PORTABLE

It comes with its own battery, and the grease reservoir can be refilled, so no external power supply is required.

HIGH-PRECISION FIT

An external distributor can be connected to supply oil to multiple points.

ADJUSTABLE CYCLE

Available in 1/3/6/12/24-month cycles to meet a variety of lubrication requirements.

A VARIETY OF CAPACITIES

Available in 125mL, 250mL and 500mL sizes.

ZCHFSL/ZCHFSG/ZCHFSKH DUAL-LINE DISTRIBUTOR



ZCHFSL



ZCHFSG



ZCHFSKH

The ZCHFSL/ZCHFSG/ZCHFSKH valves are manufactured from durable galvanised steel and are designed for use in dual-line lubrication systems, with a maximum operating pressure of 40 MPa (5,800 psi). They feature up to eight outlets, each pair of which can be fitted with a mechanical indicator rod or an electronic sensor for visual monitoring. Furthermore, the distribution valves can be fitted with low-wear proximity switches or piston detectors for electrical monitoring. The body material of the ZCHFSL/ZCHFSG/ZCHFSKH valves is not only rust-resistant but also acid-resistant.

Advantages and Features

1、Simple in design and reliable in operation;

2、Real-time monitoring of the lubrication status at lubrication points can be carried out either through visual inspection or via sensor signals;

3、The flow rate of the paired oil outlets can be easily adjusted;

4、It is easy to expand the system, as dual-line distributors can be added or removed as required within the lubrication system;

5、High pressure enables lubrication of multiple points over long distances.

Technical Specifications

Name	ZCHFSL	ZCHFSG	ZCHFSKH
Number of outlets	2~8	2~8	2~8
Flow rate per outlet	Adjustable displacement: 0–5 ml/cycle Fixed displacement: 1.25, 2.5, 3, 3.75, 5 ml/cycle	Adjustable displacement: 0–2.2 ml/cycle Fixed displacement: 0.55, 1.1, 1.65, 2.2 ml/cycle	Adjustable displacement: 0–1.5 ml/cycle Fixed displacement: 0.3, 0.6, 1.2, 1.5 ml/cycle
Maximum working pressure	Max. 40MPa		
Operating temperature	-20~120℃		
Material	Carbon steel		

ZCHCIF INTELLIGENT DISTRIBUTION VALVE

The smart distributor valve box features a highly integrated design, incorporating control valves, signal feedback sensors, and control and communication modules. It can be configured to lubricate between 2 and 6 lubrication points, each of which can be controlled independently. Each lubrication point corresponds to an operational feedback signal, enabling real-time monitoring of the operational status of any individual point.



Advantages and Features

1、Integrated filtration system to reduce the risk of failure;

2、Integrated flow meter, for accurate measurement of oil injection volume;

3、Supports both wireless and wired transmission;

4、It allows the oil supply to lubrication points to be adjusted, ensuring oil is supplied as required.

Technical Specifications

Name	Parameters
Principle of Operation	Oil supply to each point is controlled by on/off valves
Operating Temperature	-30~70 ℃
Operating Pressure	Max. 400 bar
Lubricant	Grease with a viscosity grade of up to NLGI 2; NLGI 3 is available on request
Displacement	1.2ml/次
Number of Outlets	6
Outlet Dimensions	G3/8
Material of Integrated Housing	Stainless steel or carbon steel
Voltage	Control voltage 24V; optional controller with DP communication
Protection Rating	IP 65
Inlet Dimensions	G 1/2
Wireless Communication Function	OK optional
Touchscreen	OK optional
Dimensions	Min.276 x 324 x 212mm； Max.542X324X212mm
Mounting Method	Vertical
Weight	9.5~30KG

BLOCK-TYPE AINGLE-LINE DISTRIBUTOR

A block-type single-line distributor comprises a distributor body, a spool, an indicator rod, plugs and other components.

The single-line distributor is suitable for lubrication systems with periodic oil supply via the main oil line. When pressure is applied to the main oil line, it discharges the grease from the chamber whilst simultaneously replenishing the grease reservoir for the next cycle; when pressure is relieved from the main oil line, it returns to its original position via a spring, thereby storing grease for the next discharge cycle.



Advantages and Features

1、Adjustable flow rate;

2、Precise metering, with independent oil supply to each lubrication point;

3、Pressure monitoring at the end of the main oil line; safety monitoring of the system status;

4、Each oil outlet employs a parallel configuration, with each supplying oil independently;

5、Integrated design, compact and lightweight, easy to install and maintain;

6、Visible mechanical oil level indicator with an integrated design; compact and lightweight, it is easy to install and maintain, and has an IP67 protection rating.

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable fats and oils
-30℃~70℃	-55℃~80℃	35MPa	0.2mL/cy 0.4mL/cy 0.6mL/cy	NLGI-0、1、2

ZCHIP PROGRESSIVE DISTRIBUTOR

A disc-type distributor comprises an inlet fitting, a lead disc, intermediate discs, a tail disc, an outlet fitting, a plug, O-rings, screws and a hinge assembly.

Disc-type progressive distributors are suitable for progressive lubrication systems that require continuous oil supply via the main oil line.

It is a lubrication component that meters grease and dispenses it precisely in sequence according to a specific order.



Advantages and Features

1、Precise metering, sequential lubrication;

2、The monobloc design is compact and capable of withstanding high pressure;

3、The oil outlets are interconnected, allowing for flexible and varied flow rate ratios;

4、Built-in outlet non-return valve;

5、Visual mechanical circulation indicator;

6、Lubrication cycle count (optional).

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable fats and oils
-40℃~80℃	-55℃~80℃	35MPa	0.08mL/cy 0.16mL/cy 0.24mL/cy 0.32mL/cy 0.64mL/cy 1.28mL/cy (Adjacent plots may be merged)	Up to NLGI 2

MODULAR PROGRESSIVE DISTRIBUTOR

A block-type distributor comprises an inlet fitting, a distributor valve body, an outlet fitting and an outlet plug.

A progressive distributor is suitable for progressive lubrication systems that require continuous oil supply via the main oil line. It is a lubrication component that meters the grease and dispenses it precisely in sequence.



Advantages and Features

1、Monobloc design, capable of withstanding high pressure;

2、Compact, lightweight and requiring minimal installation space;

3、Precise metering, continuous oil discharge and high efficiency;

4、Mechanical indicator rod, blockage sensor, system status safety monitoring; protection rating: IP67.

Technical Specifications

Operating temperature	Storage temperature	Max. pressure	Engine capacity	Suitable fats and oils
-40℃~80℃	-55℃~80℃	35MPa	0.2mL/cy	Up to NLGI 2

ZCHSLV SINGLE-LINE DISTRIBUTION

The ZCHSLV in-line distributor is suitable for single-line high-pressure centralised lubrication systems, dispensing lubricants compatible with polyurethane seals, with a viscosity grade of up to NLGI 2. The output is externally adjustable. An indicator needle allows for visual inspection of the distributor valve's operation. Individual distributor valves can be easily removed for inspection or replacement. Each SL-V distributor valve includes a transparent polycarbonate protective cover.

Features and benefits: Available with manifolds featuring 1 to 6 ports; the delivery rate is externally adjustable, and the transparent polycarbonate protective cover above the indicator needle allows for visual inspection; simple operation, with easy and convenient removal for inspection or replacement.



Advantages and Features

1、Manifolds with 1 to 6 ports;

2、The flow rate can be adjusted externally;

3、At a glance, the transparent polycarbonate protective cover on the indicator rod allows for visual inspection;

4、Easy to inspect or replace.

Technical Specifications

Name	Parameters
Number of outlets	1~6 unit
Flow rate per outlet	0.25-1.31ml/cy
Maximum operating pressure	Max.41.3bar
Minimum operating pressure	Min.12.8bar
Relief pressure	7MPa
Operating temperature	-40℃~82℃
Grease	NLGI-0~2
Main pipe connection	3/8 NPTF (F)
Outlet connection	1/8 NPTF (F)
Dimensions	Max.203×222×35 mm Min. 63×222×35 mm
Material	Carbon steel
Protection rating	IP67

ZCHSL SINGLE-LINE DISTRIBUTION

The ZCHSL is a column-type single-line distributor, a lubrication component that provides precise metering and independent oil supply to each lubrication point.

It features a flow rate adjustment mechanism that allows for quick and highly accurate setting, and is equipped with a visible mechanical oil discharge indicator for easy external monitoring. The maximum flow rate per outlet is 1.31 ml/cy.



Advantages and Features

1、Manifolds with 1 to 6 ports;

2、The flow rate can be adjusted externally;

3、Each indicator rod allows for a visual inspection of the injector's operation;

4、Individual distributors are easy to remove for inspection and replacement;

5、Provide a spare outlet, which can be fitted with an inlet pipe.

Technical Specifications

Name	Parameters
Number of outlets	1~6 units
Flow rate per outlet	0.131~1.31 mL/cy
Maximum operating pressure	Max.24 MPa
Minimum operating pressure	Min.12.7 MPa
Relief pressure	4.1 MPa
Operating temperature	-26℃~176℃
Grease	NLGI- 0~2
Main pipe connection	3/8 NPTF(F)
Outlet connection	1/8 NPTF(F)
Maximum dimensions	Max.203*179.4*32
Minimum dimensions	Min.63*179.4*32
Material	Carbon steel
Protection rating	IP67

ZCHRL WIRE ROPE LUBRICATOR

The ZCHRL wire rope lubricator is a wire rope maintenance tool that can be attached to equipment at regular intervals (monthly, quarterly or at other intervals) to lubricate the wire rope.

The amount of lubricant applied and the intervals between lubrication should be adjusted in accordance with the operator's recommendations. Wire ropes that are lubricated regularly have a service life approximately six to eight times longer than those that are not lubricated.



Technical Specifications

Name	Parameters
Maximum working pressure	Max. 40MPa
Suitable wire rope diameter	8-80mm
Clamp material	Cast aluminium
Seal material	Polyurethane

ZCHSP OIL SUPPLY PUMP

The ZCHSP electric grease pump is primarily used in dry-lubrication systems to replenish grease in the reservoir of dry-lubrication units.

This pump is designed without an integrated reservoir and is compatible with 200-litre grease drums. It can be operated independently or, when connected to the appropriate electrical control unit, can enable automatic grease replenishment within an electric lubrication system. The pump is a built-in plunger-type positive displacement pump, offering smooth operation and high output pressure.



Technical Specifications

Name	Parameters
Maximum operating pressure	1 MPa
Displacement	200L/h
Fuel tank capacity	200L
Voltage	380VAC
Operating temperature	-20℃~80℃
Protection rating	IP55
Motor power	1.1KW
Rotational speed	1400r/min

ZCHU1 HYDRAULIC DIRECTIONAL VALVE

ZCHU1 is a hydraulic directional control valve designed primarily for dual-line lubrication systems.

This directional control valve alternately discharges the lubricant injected by the pump into one of the main oil lines.

The other oil line is connected to the pump's return line fitting. The directional control pressure is adjustable.



Technical Specifications

Name	Parameters
Principle of Operation	Hydraulic directional control valve, two-position four-way valve
Operating Temperature	−20 to 80 °C
Lubricant	Grease up to NLGI 3; lubricating oil with a minimum viscosity of 20 mm^2/s
Flow Rate	14 dm^3/h
Operating Pressure	Maximum 350 bar
Conversion Pressure	Min. 140 bar, Max. 350 bar
Main Pipeline Connections and Branch Pipeline Connections	G 1/2 BSPP internal thread
Electrical Connections	Max. 500 V, 25–60 Hz
Protection Rating	IP 67
Dimensions of each model	
Minimum	195 x 190 x 100 mm
Maximum	195 x 195 x 195 mm
Installation method	Any location is acceptable

ZCHPP PNEUMATIC PUMP

The ZCHPP series of pneumatic piston pumps utilise a difference in air pressure to drive the piston up and down, thereby opening and closing the feed piston to convey the material. The feed rate of the pneumatic pump is controlled and adjusted by regulating the flow rate and pressure of the working gas supplied to the pump.



Advantages and Features

1、The pump head is constructed from precision die-cast aluminium alloy, whilst the steel components are made from high-density die-cast iron, ensuring a long service life;

2、The absence of direct metal-to-metal contact ensures a long service life and enables use with relatively abrasive media;

3、Double-acting pump, high flow rate;

4、Low cost and easy to maintain.

Technical Specifications

Product Name	Model	Product Specifications	
40L Pneumatic Grease Gun	ZCHPP	Compressed air: 0.5–0.7 MPa; Operating temperature: −10 °C~ 50 °C; Oil outlet thread: G1/4;	Oil delivery pressure: 30 MPa; Oil flow rate: 0–1 L/min; Grease: NLGI 0–2

ZCHG9X ELECTRIC LUBRICATION PUMP

The ZCHG9X is capable of pumping large volumes of grease and can be configured with up to 30 pump head units. Its drive and eccentric shaft design, combined with a high-efficiency worm gear and a minimal number of components, offers a range of advantages. The pump has a low failure rate, is simple to install and maintain, and is designed for use in harsh environments.

It is suitable for applications including tunnel boring, mining, rubber mixing equipment and various stationary machines with high lubricant consumption.



Advantages and Features

1、High-capacity, multi-point, high-efficiency pumping, supporting up to 30 pump heads, capable of pumping large volumes of grease; suitable for stationary machinery with high lubricant consumption, such as tunnel boring machines, mining equipment and rubber mixing machinery;

2、Modular design, economical and easy to maintain; no need to connect multiple pump components with oil pipes, resulting in a simple structure; straightforward installation and maintenance, significantly reducing costs and workload;

3、High reliability and suitability for harsh environments; features a drive and eccentric shaft design, a high-efficiency worm gear and a minimal number of components, resulting in a low failure rate; capable of stable operation in demanding conditions such as temperatures ranging from -20℃ to +70℃ and high pressure (350 bar);

4、Featuring intelligent control and flexible adjustment, the system is equipped with a high-power motor, allowing the flow rate of each pump head to be adjusted independently; the oil tank is available in 30L or 100L capacities and utilises an ultrasonic sensor to ensure precise level control.

Technical Specifications

Name	Parameters
Maximum operating pressure	Max. 35MPa
Lubricant	NLGI 0 ~ 2
Number of outlets	1~30
Drive speed	< 28 r/min
Reduction ratio	50：1　100：1
Displacement	0,13-6,4 cm^3/min
Tank capacity	100L、30L
Voltage	380VAC
Operating temperature	-20℃~70℃
Protection rating	IP65

ZCH316 MANUAL LUBRICATION PUMP

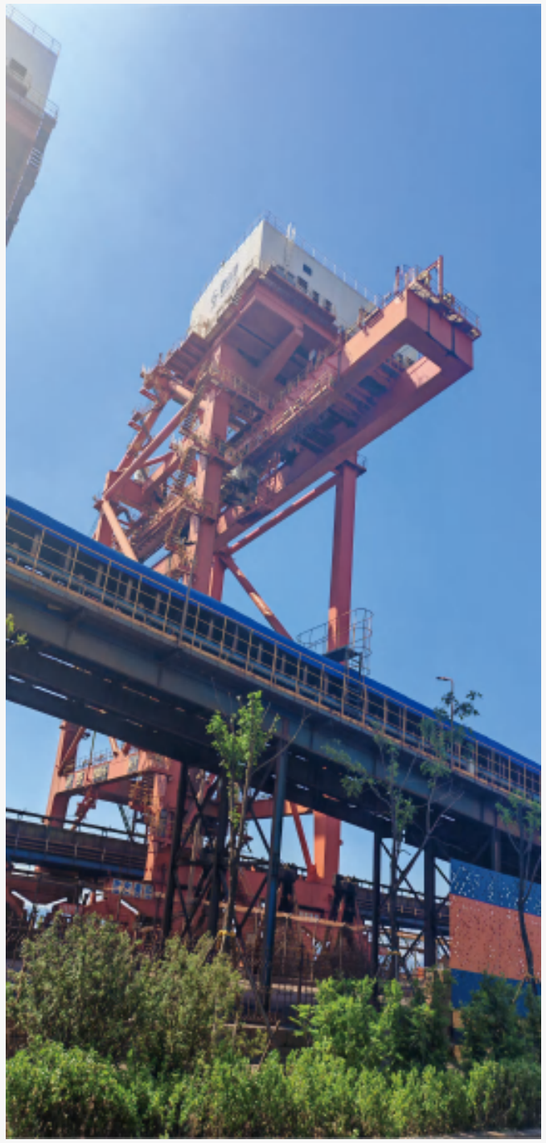
The ZCH316 manual lubrication pump is a manual high-pressure grease pump suitable for use in progressive lubrication systems.



Technical Specifications

Name	Parameters
Maximum operating pressure	31.5Mpa
Number of oil outlets	1
Engine capacity	2mL/cy
Volume	1.6L
Operating temperature	-45℃~70℃
Protection rating	IP65

THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON A SHIP UNLOADER AT A PORT IN TIANJIN







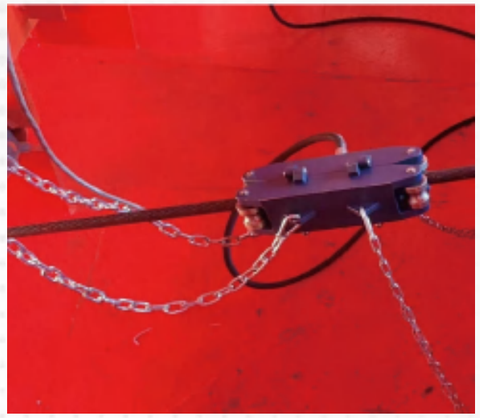
THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON A QUAY CRANE AT A PORT IN ZHUHAI



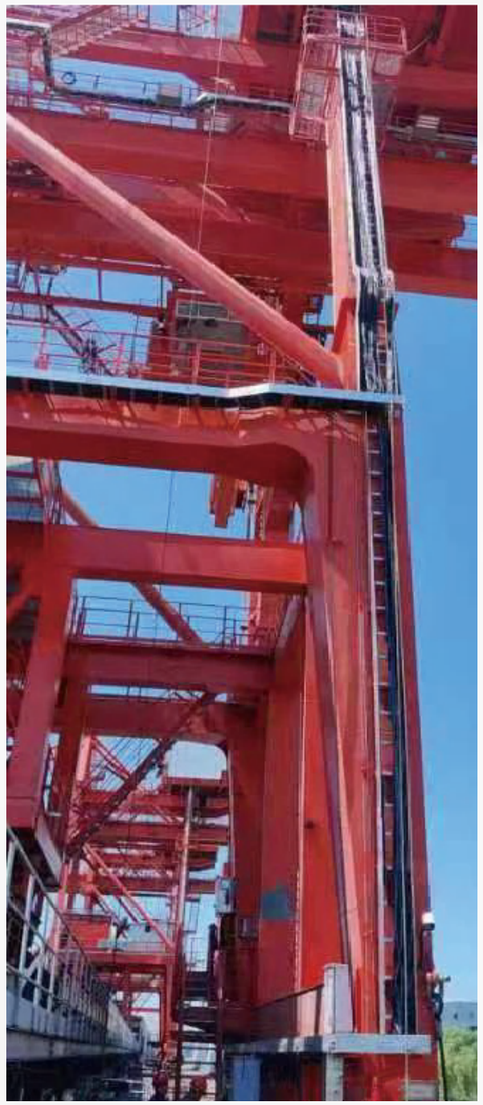




THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON A SHIP UNLOADER AT A PORT IN WUHAN







THE APPLICATION OF ZHONGCHENG CENTRALISED LUBRICATION SYSTEMS ON A CONTAINER STACKER CRANE AT A CERTAIN PORT









SKF Bearings



Deep-groove ball bearings

Thrust ball bearings



Self-aligning ball bearings



Tapered roller bearings



Mounted bearings and bearing housings

SKF Lubrication



SKF Online Monitoring

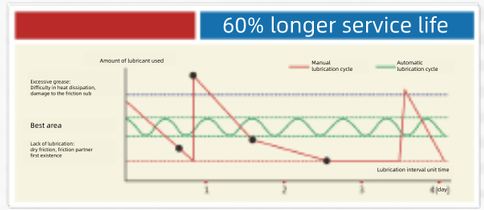






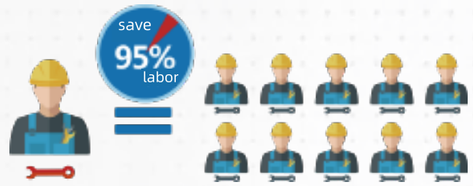
EXTENDS THE LIFE OF LUBRICATED PARTS BY 60% OR MORE

Traditional manual lubrication oil injection is not easy to control, and grease nozzle leakage, dust and sand and other dirt is easy to be brought into the friction and aggravate the wear and tear, centralized lubrication system oil circuit is fully closed, to ensure clean lubrication, and its "timing, quantitative, high-frequency" characteristics of the work of lubrication components to effectively extend the life of more than 60%.



MECHANICAL AUTOMATION, SAVING 95% OF LABOR AND ACHIEVING SAFE PRODUCTION OPERATIONS

The system's automatic lubrication—which operates at set times, at specific points and in precise quantities whilst the equipment is running—can reduce manual labour by 95 per cent; it also minimises the need for personnel to work under complex operating conditions, thereby ensuring operational safety.



ENERGY-EFFICIENT AND ENVIRONMENTALLY FRIENDLY, WITH GREASE SAVINGS OF OVER 83 PER CENT

Traditional manual lubrication results in a significant waste of grease, whereas a centralised lubrication system ensures that each lubrication point receives clean grease at the correct location, at the correct time and in the correct quantity, thereby guaranteeing effective lubrication and reducing grease consumption by more than 83 per cent.

