Lubrication Plus®
QUMENSUS®
Branded by SOLGE

Oil Condition Monitoring Total Solution





Index

Data Acquisition Analyzer (DAA) ---- 05
Ferro-Mon Sensor ---- 06
WatchCon-Metal Sensor ---- 07
SOCM8000 ---- 08
Viscosity Sensor ---- 09
EZ-ViscoCheck ---- 10
Dissolved Water Sensor ---- 11
Oil Condition Sensor ---- 12
Total Water Sensor ---- 13
EZ-LubeCheck ---- 14
EZ-WaterCheck ---- 15
EZ-Display ---- 16
LoRa Wireless Communication Device ---- 17
Data Acquisition Analyzer Demo Kit ---- 18
EZ-FeCheck ---- 19
TOMs-M ---- 20
EZ-TBN Check ---- 21
EZ-MPC Check ---- 22
VARTECTOR ---- 23
WATECTOR ---- 24
3D X-Vision ---- 25
EZ-SAM ---- 26
EZ-TAN Test Kit ---- 27
Portable Particle Counter ---- 28
Optical Laser Particle Counter ---- 29
FAC Viscometer ---- 30

Application



Hydraulic



Aerospace



Power Industry



Petrochemical



Marine Industry



Combustion Engine



Military Industry

Data Acquisition Analyzer (DAA)

Lubricant condition integrated monitoring and diagnosis device



Description

This device displays lubricant condition data on the monitoring screen by connecting various on-line sensors. Graphs, statistics and quantitative results are displayed. This measuring device measures lubrication management and abnormal failures required for important equipment at an early stage.

Application

A device that collects and evaluates data on fluid status from various fluids (lubricating oil, hydraulic oil, synthetic oil)

Lubrication | Hydraulic | Gearbox | Engine

Features

- Lubrication status can be monitored by connecting measurement sensors
- Graphs and statistics, quantitative data figures are displayed
- Integrated diagnosis of lubricating oil condition
- Compact with light weight, easy to carry
- Requires small installation space
- Max 4 sensors can be connected and monitored

Image



Data Acquisition Analyzer (DAA)



External Battery

1 OC-V(Viscosity)
2 OC-L(Oil Condition)
3 OC-RH(Relative Humidity)
4 MC-FD(Ferrous Debris)
5 Sensor Connection
6 Power Connection

Ferro-Mon Sensor
(Integrated type)

A sensor, measures ferrous debris



[General Type]



[Explosion-Proof Type]

Description

Ferro-Mon Sensor measures the concentration of iron by detecting the change in magnetic flux when magnetic particles such as Fe, Ni,.. etc are collected in the sensor probe. This sensor outputs the amount of magnetic material as "Fe saturation %" so that it detects and identifies abnormal wear conditions of the rotating machines.

Application

Diagnosis of damage to rotating machinery through ferrous debris concentration in oil.

Lubrication Hydraulic Gearbox Engine

Features

- Strong capture ability of iron particles
- Two output channels (wear and severe wear) enable separate detection of normal or abnormal wear
- Wireless communication (LoRa). Data Acquisition Analyzer (Optional)
- Explosion-proof certified products for installation in hazardous areas also available
  II 1G Ex ia IIB T4 Ga (ATEX certification)
  Ex ia IIB T4 Ga (IECEx certification)

Image



Ferro-Mon Sensor (Integrated Type)



Sensor Cable

WatchCon-Metal Sensor (Metal/Non-Metal)

Ferrous and non-ferrous debris monitoring sensor



Description

An online sensor that detects the quantity, size and properties of ferrous and non-ferrous wear debris particles in oil. It captures ferromagnetic metal particles with a diameter of 40 μm or more and non-magnetic metal (non-ferrous) particles with a diameter of 150 um or more and detects wear particles and outputs data through 10 size distributions.

Application

Diagnosis of damage to rotating machinery by quantitatively counting metal wear particles in lube oil/hydraulic oil

Lubrication | Hydraulic | Gearbox | Engine

Features

- Quantitative real-time detection of ferrous and non-ferrous wear particles
- The outer case is made of aluminum alloy, oxidized surface and light with excellent chemical corrosion resistance and pressure resistance
- Suitable for online monitoring requirements as there is little influence from external vibration during detection
- Integrated system with a compact size and easy installation
- Calibration of integrated modules on site is possible
- Compliance with CE, ASTM D1657 and other Certification and Test Standards

Image



WatchCon-Metal Sensor (Metal/Non-Metal)



Sensor Cable

SOCM8000

Sensor for precisely quantifying the contamination level of lubricant



Description

The SOCM8000 is used to measure and quantify the number of solid contaminants such as hydraulic fluid, lubricants, and transmission fluid, and is designed for permanent installation with mineral oil and synthetic oil as the operating fluid.
It can be operated using the international standard format ISO4406, NAS1638.

Application

Quantitatively measures particle contamination to diagnose equipment condition

Lubrication | Hydraulic | Gear Box | Transformer
Engine | Fuel | Storage Tank | Oil Purifier

Features

- Adopts the principle of photoresist method (shading method).
- Capable of simultaneously detecting eight particle sizes.
- The instrument can realize continuous automatic online detection, and can display the particle number and grade in real time or switch to display only the grade mode.
- Optionally, Ferrous debris sensor and total water sensor can be connected to view the measured results at the same time.
- LoRa Wireless Communication Device and Data Acquisition Analyzer (DAA) are sold separately.

Image



SOCM8000



Optional sensors to connect

Viscosity Sensor

A sensor, measures viscosity



Description

Sensor that measures lubricants viscosity.

Application

Diagnosis of contamination and degradation of oil by measuring viscosity

- Lubrication
- Hydraulic
- Gear Box
- Transformer
- Engine
- Fuel
- Storage Tank
- Oil Purifier

Features

- Kinematic viscosity measurement without consumables
- Can be measured in a short time
- By using a heating device, you can measure the viscosity at 40℃ (For off-line test)
- On-line/off-line test possible

Image



Viscosity Sensor



Heating Device (Optional item For Off-line Test)

1. Viscosity Sensor
2. Sensor Cable

EZ-ViscoCheck
[Portable Viscometer]

Easily measure viscosity at the site



Description

A portable instrument that measures viscosity from a vibrator in oil.

Application

Real-time monitoring of oil condition and temperature



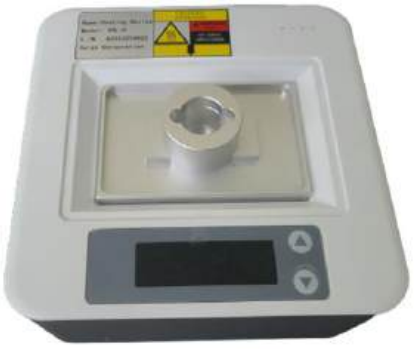
Features

- Kinematic viscosity measurement without consumables
- Can be measured in a short time
- With the optional heating device, the sampled oil can be heated to 40°C for 40°C viscosity measurement

Image



EZ-ViscoCheck[Portable Viscometer]



Heating device (Optional, to measure the viscosity at 40℃)

Dissolved Water Sensor



A sensor, measures dissolved water in oil

Description

This sensor measures the dissolved moisture from the electrodes in the oil. Water contamination is a major cause that badly affects oil along with particle contamination. Water contamination reduces oil life , e.g., damage to the base oil, loss of additives, etc., accelerates corrosion of the equipment and destroys the lubricating film which brings metal-to-metal contact. Metal-to-metal contact causes abnormal wear and failure of the equipment. Water in oil exists in three types, i.e., free, emulsified and dissolved. When water flows into oil from the outside or is generated by dew condensation, it is necessary to quickly detect and establish countermeasures to prevent the above-mentioned problems.

Application

Diagnosis of water contamination in oil by measuring water

Lubrication | Hydraulic | Gear Box | Transformer

Engine | Storage Tank | Oil Purifier

Features

- Capable of measuring water content in oil without reagents
- Water content ppm measurement in the laboratory can not identify whether free water harmful to the equipment is present in the oil, but this water(RH)% sensor can detect the presence of free water
- Capable of measuring up to a resolution of 0.01% (two decimal points) under various harsh operating conditions
- Dissolved moisture sensor using special technology, very stable and robust
- Well-designed probe structure makes it easy to clean
- Antibacterial contamination prevention function through active use of the sensing part treated with alumina,an antibacterial material
- LoRa wireless communication function, integrated lubricant condition diagnostic device sold separately

Image



Dissolved Water Sensor (RH%)



Sensor Cable

Oil Condition Sensor

A sensor, measures oil quality



Description

This oil condition sensor measures permittivity in the oil to check oil conditions such as oil life. By detecting oil condition, it can be widely used for finding solution.

- Estimate lifespan of oil to determine the optimal time to replace the lubricant
- Permittivity of oil varies when oil degradation, additives, contaminants, wear particles, moisture,and mixing of different oils occurs in oil.
- Decision whether or not to operate oil purifier to remove degraded by-products
- Quick diagnosis and cause analysis by diagnosing the properties and contamination of the lubricant
- Optimal lubricant selection for the equipment

Application

Diagnosis of degradation status and life of lube oil/hydraulic oil



Features

- Measurements in a short time without consumables
- Oil life needs to be discussed in advance (Additional costs may apply)
- Assemble according to the direction of fluid flow. Direction adjustment required
- LoRa wireless communication available, integrated diagnostic device sold separately

Image



Oil Condition Sensor



Sensor Cable

Total Water Sensor

A sensor, measures total water in oil



Description

A sensor that measures total water (free, emulsified, and dissolved) using dual electrodes. Water and particles are the main causes of adverse effects on oil. Water contamination shortens the life of the oil (damage to base oil, loss of additives, etc.), accelerates corrosion of equipment, and destroys the lubricating film, causing metal-to-metal contact. Metal-to-metal contact causes abnormal wear within the equipment, resulting in equipment failure. Water in these oils exists in oil in three forms (free, emulsified, dissolved), and when Water is introduced from the outside or caused by dew condensation, it is quickly detected and should establish the counter-measures to prevent the above-mentioned problems from occurring.

Application

Diagnosis of water contamination in oil



Features

- Water content in lubricating oil / hydraulic oil can be measured without reagents
- Oil life (RUL) can be measured. Prior consultation required, additional costs may apply
- LoRa wireless communication available, integrated lubricating oil condition diagnostic tool sold separately

Image



Total Water Sensor



Sensor Cable

EZ-LubeCheck
[Portable Water Content Tester]



Easily measure total water in oil at the site

Description

This device allows you to easily measure the water content and oil life (optional) of lubricants and hydraulic fluids on site with a portable device. Water and particle contaminations are a major cause of critical effects in oil. When contaminated with water, oil life (base oil damage, loss of additives, etc.) accelerates corrosion of equipment, and the lubricating film is depleted, causing metal-to-metal contact. Metal-to-metal contact causes abnormal wear within the equipment, resulting in equipment failure. Water in the oil exists in three forms (free, emulsified, and dissolved). If water inflow or is caused by condensation, you must quickly measure and find a solution to protect.

Application

Diagnosis of water contamination in fluids

Lubrication | Hydraulic | Gear Box | Transformer
Engine | Storage Tank | Oil Purifier

Features

- Available of measuring water content in lubricants / hydraulic oil without reagents
- Built-in battery and handy type immediately measure sample oil regardless of any sites.
- Remaining useful oil life and oil quality can be measured (advance consultation required. Additional costs may apply)

Image



EZ-LubeCheck [Portable Water and Oil Life (optional) Tester]

1. Display
2. Status indicator LED
3. Select Button
4. USB C type port
5. Oil sensing unit

EZ-WaterCheck
[Portable Water Content Tester]

Easily measure dissolved water in oil at the site



Description

EZ-WaterCheck is a portable measuring device that measures water from electrodes in oil. Water and particle contaminations are a major cause of critical effects in oil. When contaminated with water, oil life (base oil damage, loss of additives, etc.) accelerates corrosion of equipment, and the lubricating film is depleted, causing metal-to-metal contact. Metal-to-metal contact causes abnormal wear within the equipment, resulting in equipment failure. Water in the oil exists in three forms (free, emulsified, and dissolved). If water inflow or is caused by condensation, you must quickly measure and find a solution to protect.

Application

Diagnosis of water contamination in fluids

Lubrication | Hydraulic | Gear Box | Transformer

Engine | Storage Tank | Oil Purifier

Features

- Available of measuring water content in lubricants / hydraulic oil without reagents
- Built-in battery and handy type immediately measure sample oil regardless of any sites.

Image



EZ-LubeCheck [Portable Measuring Device

❶ Display ❸ Select Button ❺ Oil sensing unit

❷ Status indicator LED ❹ USB C type port

EZ-Display

Easily display the parameter from online sensor



Description

This device is a low-cost device that easily displays sensor data.
This device can be applied when it is difficult to install an expensive display unit.

Features

- Connect multiple measurement sensors to monitor
- Only current measurement values are displayed in real time
- Small installation space
- Just one sensor can be connected to monitor
- Can be used as online sensor display equipment with Qumensus and other company sensors

Configuration example





1 Ferro-Mon Sensor
2 Dissolved Water sensor

Image





EZ-Display

1 Display
2 Status indicator LED
3 Select Button

Sensor cable & Power adaptor

LoRa Wireless Communication Device



Device that communicates wirelessly instead of cables

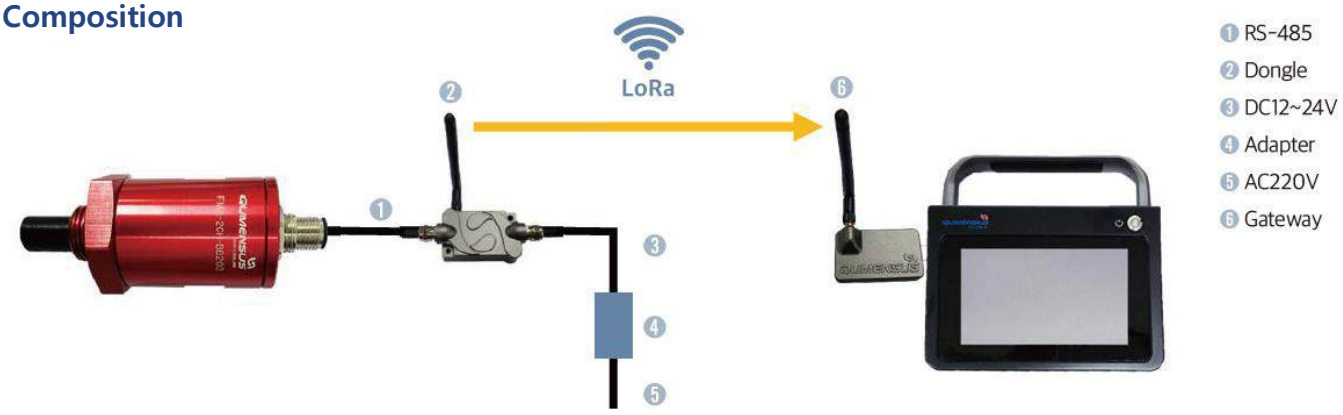
Description

This device can communicate wirelessly instead of cable.
It can be applied when cable installation cost is expensive or it is difficult to install cable.
It consists of a dongle that sends signals and a gateway that receives signals.

Features

- Use own network
- Up to 1km long wireless network distance
- Security is safe

Composition



Image



Dongle



Gateway

Data Acquisition Analyzer Demo Kit

Lubricant Health Check



Box 1



Box 2

Description

The Data Acquisition Analyzer demo kit consists of two boxes.
Box 1 consists of DAA and sensor equipment, and Box 2 consists of a viscosity heating device and necessary accessories for measurement. This demo kit is used to test the function and performance of the sensor in advance if you want to use the sensor as a portable test kit. You can also use this as a kit for demonstration to customers.

Box 1 Configuration			
❶	DAA-Data Acquisition Analyzer	❽	OC-V (Thread: Flange)
❷	Sample bottle for (OC-RH & OCL)	❾	Sensor Communication Cable
❸	Sample Bottle Cap set (OC-RH)	❿	Viscosity Communication Cable
❹	Sample Bottle Cap set (OC-L)	⓫	OC-L (Thread: PF 1/2", Flange available)
❺	MC-FD reference specimen (Wear / Severe wear)	⓬	OC-RH (Thread: PF 1/2")
❻	Form Pad	⓭	MC-FD (Thread: PF 1/2")
❼	DAA Power Adaptor and Cable		

Box 2 Configuration	
❶	Tissue (To whip off oil residual)
❷	Extra Sample bottle
❸	Heating Device

EZ-FeCheck
[Portable Fe Density Tester]

Easily measure ferrous debris density in oil at the site



Description

EZ Fe-Check is a device that can quickly and easily measure ferrous debris contents in oil samples collected from various systems such as gearboxes Combustion engine, Robot etc... By periodically managing the ferrous debris level, and abnormal wear conditions in the system are quickly detected. This device also periodically manages the ferrous debris level, quickly detects minor failures and abnormal wear conditions in the system, finds appropriate solutions, reduces costs, and prevents damage to the positive condition

Application

Electric Motor | Hydraulic | Combustion Engine | Robot

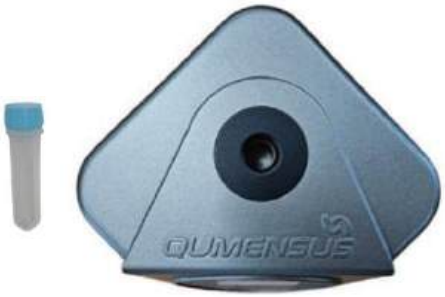
Gear Box
(Cooling Tower, Agitator, Coal Crusher, Transmission, Wind Turbine Etc.)

Features

- Compact design
- Economical and accurate measurements
- Self-calibration possible
- Both lubricant and grease can be measured
- Built-in battery (possible for portable measurement)

Image





EZ-FeCheck (Portable type)

TOMs-M

Total Oil Monitoring System



Description

TOMs-M is an online condition oil monitoring system for the status of various lubricants such as turbine oil, hydraulic oil, and EHC Oil. By analyzing and monitoring contamination parameter including particle, water, permittivity, and viscosity, or more of the oil contamination parameters can be quickly diagnosed in real time.

Features

- Capable of simultaneously measuring and monitoring data from up to four sensors (default parameters: contamination level, relative humidity, dielectric constant, viscosity)
- Measurement parameters can be modified upon agreement (optional parameters: iron concentration, ferrous/non-ferrous particles, oil color)
- It is compact and wheel-type, making it easy to move.
- Oil condition can be measured without any consumables.
- Measurement possible in a short period of time
- Wireless communication and cloud server service supported

Image



TOMs-M

❶ Carrying handle	❸ Power/operation switch	❺ Hose Inlet/Outlet	❼ Wheels
❷ Monitoring screen	❹ Power cable	❻ Cable and Hose Holders	

EZ-TBN Check
[Portable TBN Tester]

Easily measure TBN in oil at the site



Description

The EZ-TBN Check measures TBN and optionally water. When lube oil is inserted into a machine and operated, it is oxidized, contaminated, and deteriorated due to additive consumption over time. Therefore, we diagnose the deteriorated oil condition of most industrial oils by viscosity or acid value to diagnose the deteriorated oil condition. In contrast, in the case of internal combustion engine oil, sulfuric acid is generated due to incomplete combustion and the reaction of sulfur and moisture in the fuel during the driving process, so a neutralizer is added to neutralize these acidic substances when blending internal combustion engine oil, and the remaining amount of neutralizer is expressed as TBN value. In general, the criteria for determining the life of internal combustion engine oil through TBN value is to consider oil change when the residual TBN value of used oil compared to new oil falls below 50%. When the TBN value falls below 50%, acidic substances and deposits accumulate in the cylinders, reducing the operational reliability of the engine. In particular, for large two-stroke engines in the marine industry, cylinder scuffing damage can be prevented by properly controlling the amount of cylinder oil being refueled and the TBN value. Therefore, it is of utmost importance to control the TBN of the cylinder oil being refueled and the TBN value of the waste cylinder oil.

Application

Engine | Combustion Engine | Lubrication

Features

- Fast measurement times (3-15 minutes)
- Durable bottle for long-term use
- Reagents and lubricant are mixed in the bottle and can be observed during the measurement process

Image



❶



❷

EZ-TBN Check

❶ EZ-TBN Check
❷ Glass bottle

EZ-MPC Check
[Portable MPC Tester]

Easily measure the MPC at the site and lab



Description

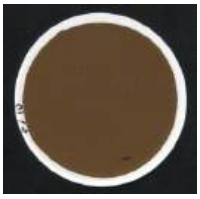
EZ–MPC Check is MPC (Membrane Patch Colorimetry) Tester that quantifies the condition of degradation by-products (sludge, varnish, carbide, etc.) generated as lubricating oil/hydraulic oil degrades. The MPC value, which is the analysis value of this equipment, is a representative value that indicates the level of potential risk of varnish that can have a fatal effect on the equipment.

Turbine and rotor manufacturers manage MPC in accordance with ASTM standards.

Features

- Convenient loading system
- Output : Delta E, L, a+b
- Diagnosis by distinguishing between degraded by-products and carbide
- Saving and exporting function for measured results
- Automatic diagnosis evaluation function

MPC △E : 68



MPC △E : 21



Image







EZ-MPC Check

VARTECTOR
[Varnish Detector]

The world's first automatic MPC Tester fully complied to ASTM D7843



Description

VARTECTOR diagnoses the dangers of varnishes from turbine oil using standards from ASTM D7843(Standard Test Method for Measurement of Lubricant Generated Insoluble Color Bodies in In-Service Turbine Oils using Membrane Patch Colorimetry) about the CIE delta E value, an optical color numerical notation. Latent varnish in turbine oil can lead to problems such as an increase in vibration of turbine spindle bearings and temperature, filter clogging, unable to control temperatures, and heating of turbine oil. Therefore, it is essential to know beforehand.

Features

- System that automatically loads samples, self-diagnose, and verifies itself
- Print: Delta E, L, a+b (Delta L is EHC Oil's carbide diagnostics)
- Classifies between deterioration and carbide before diagnosing
- Unique calibration function
- Automatically saves measured values and exports or saves it in USB
- Contains automatic diagnostic assessment report features (optional: printer)
- Only tester that fully applied the ASTM D7843 Standards
- Options: Dedicated Printer, Membrane Patch Maker

Image





WATECTOR
[Water Detector]

Visually detect and drain water in oil



Description

Water contamination in oil leads to physical and chemical damage to the base oil of lubricants, additives, and mechanical equipment. This provokes shorting the life of equipment and lubricants, and also causes negative effects in the reliability of components. Water contamination in industrial sites is the second most common contamination factor in having great effects, after particle contamination. Because it causes equipment failure, reduced operational reliability, and more, water contamination must be easily visible and managed. Lubricant Plus's WATECTOR not only detects water inflow and removes it, but also allows you to detect ferrous wear with your eyes. Also, water inflow in winter is prevented with our patented technology which increases safety.

Application

Cooler | Gear Box | Storage | Oil Tank | Bearing Housing

Features

- Easy to surveil water inflow in used oil
- Can detect the degree of deterioration of the used oil with visual judgment
- Can separately discharge free water in the used oil
- Judges the damages and usage of parts in the equipment including Cooler and Breather
- Quickly detects the equipment's sealing defects and cracks
- Removes ferrous wear and allows visual surveillance using the attached powerful magnet inside
- Visual identification of free water generation is suitable for condition management
- Prevention of oil leakage by double protective windows despite damage caused by water freezing
- Able to install in short spaces (can install vertically or horizontally)

Image



WATECTOR (Water Detector)

❶ Air vent (Quick Refueling) ❷ Double Housing (Prevents Damage and Leakage) ❸ Magnetic Rod (collects Iron Particles) ❹ Drain Valve (Discharges Water)

3D X-Vision

3D oil level gauge that makes it easy to monitor the appropriate oil level and oil condition from multiple directions



Description

Among the four fundamentals of lubrication management (appropriate oil, appropriate amount, appropriate amount, proper method), the appropriate amount to manage the appropriate oil level is very important. Therefore, we are using a three-dimensional oil level gauge to inspect and manage in the site. After a certain period of time, the generally installed flat type oil level gauge has demerits. Various contaminants such as sludge and varnish are precipitated on the product surface, making visual detection impossible even if the oil falls below the appropriate oil level. Additionally, the existing product is hard to decomposition which makes it challenging to manage and clean. 3D X-Vision not only allow you to easily monitor the appropriate level of the oil using the 3D oil level gauge, but also allows monitoring and sampling of the oil color and iron abrasion.

Application

- lubrication system
- Hydraulic system
- Gear Box (Reducer, Increaser)
- Engine System, etc.

Features

- Accurate oil level can be checked from various angles
- Multi-functional Port : Sampling port, for collecting abrasive powders (optional)
- Double transparent window that minimizes the possibility of oil leakage in case of damage
- Made of a material that does not get dirty even after long-term use and has good visibility
- Easy to clean and unclamp
- Used a chemically resistant layer and a shock-resistant material to increase safety
- Patented product (number 10-1539025)

Image





Double Housing | Single Housing

1 Double Housing (Prevents Damage and Leakage)
2 Magnetic Rod (Collects Iron, diagnose Component Damage)
3 Sampling Valve (Collects Samples)

EZ-SAM
[Motorized Sampling Pump]

Easily collect the oil sample



Description

Fluid sampling should be performed quickly and safely in accordance with the procedures prescribed at the appropriate location in the field.
This is an electric sampling pump that can collect high viscosity oil with excellent suction power while compensating for all the shortcomings of the existing manual pump.

Application

Gear Box (Reducer, Increaser)

Storage

Fluids Such as Water and Fuel

Features

- Oil is collected into the sample bottle by installing an electric motor-driven vacuum pump
- Allows more convenient sampling compared to doing it manually
- Sturdy and provides a grip that can be held with one hand
- Adopts standardized clean vacuum sample bottle fastening specifications
- One-touch operation switch
- Equips a speed control valve to control the speed of collection
- Samples can be collected without external contamination
- Installation of a shoulder belt for stable movement and collection(optional)
- Replaceable battery

Image





EZ-SAM

EZ-TAN Test Kit

The optimal solution for measuring lubricant acid value



Description

In the case of a lubrication system operated under excessive temperature, viscosity changes are caused by oxidation and nitrification reactions, and the generated oxide is fixed to the metal surface, causing equipment failure. The acid value is a measure of the degree of contamination of organic/inorganic acids in the oil.

Features

- The most cost-effective way to test the acid value (No need for purchasing equipment)
- Quick measurement of acidity in less than 1 minute
- The reagent is packaged and easy to use (safe since it doesn't use toluene)
- Uses ASTM D974 as a base, so it is a very accurate authorized testing method (accuracy: ±0.01AN, when used micropipette)

Image



EZ-TAN Test Kit

1. Total Acid Value TS-01 1BTL (500ml) 25 doses
2. TD-01 titrant 1BTL (60ml) several hundred doses
3. testing container
4. dispensing stopper
5. 1ml syringe

Portable Particle Counter

Precisely measure the number and size of particles in the oil



Description

This is a device that diagnoses contamination by precisely analyzing the size and number of contaminant particles in a fluid with a CMOS camera. The CMOS camera method visually captures the actual shape, size, and number of particles through high-resolution images, providing greater accuracy and analytical confidence than traditional light interception methods. The device is housed in a portable hard case for easy use in the lab and in the field, and is widely used as a key analytical tool for equipment protection and maintenance in a variety of industries, including power plant, aviation, aerospace, refining, petrochemicals, iron and steel, paper, cement, automotive, machinery, transportation, ports, and more. EZ-FeCheck and Total Water Sensors can be connected as options to enable additional measurement and monitoring of iron, moisture, and oil life.

Application

Measures and diagnoses multiple items, including lubricants, diesel engines, transmissions, hydraulic HPUs, reducers, compressors, bearings, pumps, and other lubrication equipment oils.

Features

- Measure multiple items (particle contamination, iron, moisture, oil life) with a single device.
- Easy to transport and can be attached directly to on-site equipment for analysis and diagnosis.
- Accurate measurements are possible as moisture and bubbles are not counted.

Image





Portable Particle Counter

Optical Laser Particle Counter

Multifunctional particle contamination analyzer



Description

This device measures the particle size and number of contaminants in oil. Based on the principle of light blockage / shading light, the instrument is used in various industries such as power generation, aviation, aerospace, oil refining, petrochemicals, iron and steel, paper, cement, transportation, ports, hydraulics, metals, machinery, automotive production, etc. It can also measure particles in various oils (hydraulic oil, lubricating oil, engine oil, turbine oil, gear oil, aviation oil, etc.)

Application

Various industries such as aviation, aerospace, electric power, petrochemicals, refining, steel, paper, cement, transportation, ports, metals, machinery, automobile manufacturing, and military equipment. Measurement of particle contamination in various fluids (hydraulic oil, lubricating oil, engine oil, turbine oil, gear oil, aviation fuel)

Features

- Accurate and fast detection based on laser light blocking principle with excellent repeatability and accuracy
- Sample system using a precision syringe allows for accurate sample volume control and fast results
- Water (RH% or ppm) and turbidity (ASTM D4176) measurement available
- Positive/negative pressure regulator re moves gas(bubble) from the sample and enables measurement of highly viscous samples
- Touchscreen color LCD display for easy and convenient menu control
- Built-in standard specifications (ISO4406, NAS1638, SAE AS 4059, etc.) for checking contamination levels
- 16 particle size channels can be randomly set, used to facilitate particle size analysis test.
- Test results can be stored, retrieved and analyzed
- Data storage function used to facilitate the detection of data archiving, retrieval, and analysis
- Built-in printer for immediate printing of results
- Sample size, measurement speed, and cleaning speed can be adjusted
- RS232 software for data transfer to an external computer
- Dual calibration function using ISOMTD, ACFTD, etc. can be set according to the desired size and standard substance

FAC Viscometer
[Viscometer For Field/Lab]



A portable viscometer

The solution for fast, accurate and compact viscosity analysis

Description

The FAC Viscometer is a portable, high-speed kinematic viscosity meter integrated with an automatic cleaning system. It was developed for easy and rapid measurement of the kinematic viscosity of transparent and opaque Newtonian fluids (including new and used oils) in various on-site and ambient temperatures. Its lightweight design allows for easy portability for measurements in the laboratory and field, and its simple operation makes it accessible even to beginners. The automatic cleaning system automatically cleans the instrument when cleaning fluid is added, providing exceptional convenience.

Application

Measurement of kinematic viscosity of oils (new oil and used oil, etc.) used in industrial sites, including various lubricants, hydraulic oils, and engine oils.

Features

- Excellent portability/mobility: Compact and lightweight.
- Quick measurement: Measurements can be taken anywhere, with results typically available within 1-2 minutes.
- Contained in a custom, portable case with integrated design features (waterproof and shockproof), it is easy to carry and store safely.
- Long battery life: The battery provides approximately 10 hours of use on a single full charge.
- More accurate viscosity measurement is possible by changing the capillary tube according to high and low viscosity.

Image







Display



Lubrication Plus

www.lubricationplus.net
lubricationplus@solge.com
+82-53-588-3301
11, Secheonbuk-ro 8-gil, Dasa-eup, Dalseong-gun, Daegu, Republic of Korea