

# ParVision – Pro

[Lubrication & Fuel Particle/ Moisture /  
Particle Shape & Diagnosis / Oil Life Diagnosis Equipment]

Lubrication Plus®  
**QUMENSUS**

## Lubricants and Fuels

### Particle/ moisture / particle shape & diagnosis / Oil life Diagnosis

Innovative equipment that solves measurement and diagnostics in one instrument

#### ParVision-Pro

#### A world **FIRST**



It is an innovative 'ALL in ONE' analysis equipment that diagnoses and monitors the contamination level, moisture, particle shape and type diagnosis, and life span of lubricants or diesel fuel in one pass.

This equipment can be analyzed in real time by connecting to piping or reservoirs in the field as well as in the laboratory, and it is easy to move around and easily store data. Unlike the existing particle counter equipment, basically, the contamination level (ISO / NAS / SAE, etc.) grades are not only displayed, but also a picture of the particles can be viewed, and the shape of the particles is diagnosed to distinguish the type of wear (eg fatigue wear, Cutting wear) degree by removing air bubbles from counting, and resulting in accurate real values.

In addition, it is equipped with a function to measure the life value of oil and oil, and it is also a device for predictive diagnosis and CBM, which is very useful in the field because it is possible to diagnose contamination, wear, and degradation level with one device.



PLANT HIRE



INJECTION  
MOULDING



DATA CENTRE FUEL  
TESTING



MANUFACTURING



AUTOMOTIVE INDUSTRY

## Feature

- Multi-item measurement with one device (4 types-pollution / moisture / particle shape and wear type diagnosis / oil life)
- It is easy to move and can be analyzed and diagnosed by attaching it directly to the facility on site
- It is possible to check and store the image of particles in real time for easy diagnosis
- Easy to diagnose by automatically classifying and marking the shape of particles

Lubrication Plus+

© 2020 LubricationPlus. ALL RIGHTS RESERVED.  
www.lubricationplus.net Please ask to lubricationplus@gmail.com  
Solge Corporation www.solge.com Please ask to cs@solge.com  
T.+82 53 588 3301, Mobile. + 82 10 6734 1974

# ParVision – Pro

[Lubrication & Fuel Particle/ Moisture /  
Particle Shape & Diagnosis / Oil Life Diagnosis Equipment]



## Function



### ▪ Particle count & shape

- Particle counter equipped with CCD camera counts contaminated particles
- The notation is NAS1638, ISO4406, SAE AS4059
- Particle size measured over 4, 6, 14, 38, 70, 100 $\mu$ m
- Images of particles are captured and stored, especially air bubbles Exclusions result in more accurate measurements.
- Complement the shortcomings of ordinary laser particle counters
- Particles over 20 $\mu$ m are classified into categories such as Fatigue Wear, Sliding Wear, cutting Wear and Fiber. When this wear pattern is diagnosed, it is easy to establish improvement measures.



### ▪ Moisture (% Relative humidity saturation)

- RH (Relative Humidity) concept sensor that measures the saturation of moisture in lubricants.
- It is expressed as saturation degree [%], and the moisture state in the lubricant becomes free moisture (saturation 100%).
- Expressed as% of. That is, the value of 70 to 80% is a stable value since there is no free moisture.



### ▪ Oil life (Oil Degradation)

- Based on input of more than 500 references, the life of each measured lubricant Predictable. In other words, it is not necessary to set the initial value by obtaining new oil.
- By predicting the life, you can decide when to start Varnish removal purifier or replace the lubricant.

## Technical Information

Fluid Compatibility	Synthetic Oils, Organic Oils, Mineral Oils, Diesel Fuel (420 cSt viscosity limit)
Display Information	Particulate: ISO 4406, SAE AS4059 & NAS 1638. Water: Relative Humidity (RH%). Oil Condition: Utilises Tan Delta's oil life sensor to determine the remaining life of any oil profiled.
Modes of Operation	High Pressure live system sampling (up to 350 bar) Bottle sampling and Tank sampling.
Data	All data stored locally and backed up off-site. Export to .CSV or PDF
Calibration	500 oils profiled with the ability to self calibrate any oil also included, via a one time routine.

Lubrication Plus+

© 2020 LubricationPlus. ALL RIGHTS RESERVED.  
www.lubricationplus.net Please ask to lubricationplus@gmail.com  
Solge Corporation www.solge.com Please ask to cs@solge.com  
T.+82 53 588 3301, Mobile. + 82 10 6734 1974

# ParVision – Pro

[Lubrication & Fuel Particle/ Moisture /  
Particle Shape & Diagnosis / Oil Life Diagnosis Equipment]

Lubrication Plus®  
**QUMENSUS**

## Actual Pictures



## Application

- Hydraulic HPU
- Bearing
- Transmission
- Mobile facilities (for mobile)
- Gearbox
- Wind power generator
- Pump
- diesel fuel
- Compressor
- Diesel engine
- Other lubrication equipment



### Battery life

Rechargeable battery lasting 6 hours for easy use in the field



### Internal memory

The measured data can be saved on a USB stick.



### Case design

It is mounted in a light and sturdy hard case, so there is no problem in moving to the site.



### Trending software

Trend management and diagnosis by receiving data from each sensor with the built-in PC



### Improved fluid flow, pump feature set

Built-in gear pump removes air bubbles and helps stable measurement.

Lubrication Plus+

© 2020 LubricationPlus. ALL RIGHTS RESERVED.  
www.lubricationplus.net Please ask to lubricationplus@gmail.com  
Solge Corporation www.solge.com Please ask to cs@solge.com  
T.+82 53 588 3301, Mobile. + 82 10 6734 1974



# ParVision – Pro

[Lubrication & Fuel Particle/ Moisture /  
Particle Shape & Diagnosis / Oil Life Diagnosis Equipment]

Lubrication Plus®  
**QUMENSUS**

## Software

### Main Software Screen



#### ▪ Oil Life

- Oil life is measured according to Input reference by type such as hydraulic oil, gear oil, turbine oil, etc.
- Easily recognized and marked on the life bar graph.



#### ▪ Water Content(RH)

- Display relative humidity saturation %
- Trend and status value display (temperature value when measuring)



#### ▪ Particulate Analysis

- Particle size number(4, 6, 14, 21, 38, 71 & 100 $\mu$ m)
- ISO, NAS, SAE grade trend graph display
- Particle image photo and particle size measurement possible
- Classification and marking of wear type of particles (Fatigue / Sliding / Cutting / Fiber)

Particle Analysis results per ISO			
Particle Size	Count	Unit	ISO
<4	200	1	100
4-6	200	1	100
6-14	200	1	100
14-21	200	1	100
21-38	200	1	100
38-71	200	1	100
71-100	200	1	100
>100	200	1	100

Lubrication Plus+

© 2020 LubricationPlus. ALL RIGHTS RESERVED.  
www.lubricationplus.net Please ask to lubricationplus@gmail.com  
Solge Corporation www.solge.com Please ask to cs@solge.com  
T.+82 53 588 3301, Mobile. + 82 10 6734 1974

# ParVision – Pro

[Lubrication & Fuel Particle/ Moisture /  
Particle Shape & Diagnosis / Oil Life Diagnosis Equipment]

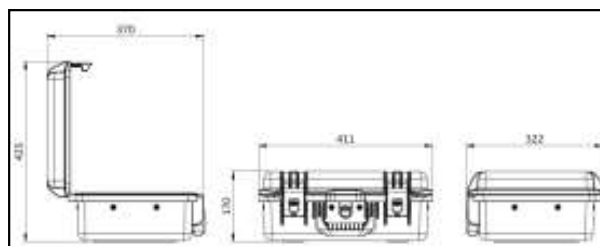


## Specification



**ParVision-Pro** can be used in the analysis room (Lab.) And in the field (Field), and can be used in connection with a tank (reservoir) or a high pressure piping (max. 350 bar).

## Size



Specification	Detail
Dimensions	(w)411 mm x (d)322 mm x (h)170 mm
Weight	12.0 kg
Finish	Black HPX resin
Nominal Battery Voltage	15.0 VDC
Charge Voltage	16.8 VDC
Capacity	5.2 Ah
Charge time	2 hours (80%) 5 hours (100%)
Run time	Up to 6 hours (depending on fluid viscosity)
Modes of operation	Bottle/flask sampling (500ml minimum recommended) High pressure feed (using pressure reducing device)
Cleanliness standards	ISO 4406, NAS 1638, SAE AS4059
Pump type	Gear pump
Duty cycle	Continuous
Viscosity range	1-2400 cSt (1-300 cSt with High Pressure device)
Fluid compatibility	Diesel & oil (hydraulic, lubrication, mineral, synthetic, bio)
Fluid temperature	-10 to 55°C (oils) -10 to 50°C (diesel)
Connections	1604 minimess test points, with 0.6m long 8mm tubing
Inlet Pressure	2.5 bar max (up to 350 bar with optional High Pressure device)
System Pressure	10 bar max
Operating temperature	0°C to +50°C
Environment	Lid closed – IP67 Lid open – IP54
Maximum humidity	97% relative humidity, non-condensing
Certification	Factory calibration certificate CE declaration
Verification frequency	12 months recommended

Lubrication Plus+

© 2020 LubricationPlus. ALL RIGHTS RESERVED.  
www.lubricationplus.net Please ask to lubricationplus@gmail.com  
Solge Corporation www.solge.com Please ask to cs@solge.com  
T.+82 53 588 3301, Mobile. + 82 10 6734 1974