

OilWear® is a range of online sensors for monitoring particles in fluids. They are based on a patented technology of digital image and video processing, which achieves outstanding and reliable results at low cost.



OilWear® SHAPE SERIES



atten2's OilWear® S100 is an online sensor that quantifies particles larger than **4µ** present in fluids, classifies them by size according to **ISO, NAS or SAE standards**, and determines their origin.

The determination of origin is achieved by classifying the particles larger than **20µ** according to their **size and shape**, to determine the root cause: fatigue, sliding or cutting. This feature, which makes **OilWear® S100** unique, is achieved by using the embedded expert system where the knowledge and expertise of **IK4-TEKNIKER** laboratory analysts has been dedicated.

Even with its high performance **OilWear® S100** is a **competitive** sensor in terms of cost, designed to be permanently installed on a single or on multiple machines, providing **real-time** information on fluid contamination.

OilWear® S100 provides key information to carry out a **predictive maintenance** strategy. Early stages of machine failures can be easily identified by the measurement of abnormal amount of particles.

OilWear® S100 has a fully **modular** design, and its measure module, which is the main responsible for the counting and classification of the particles, can be easily integrated into the oil **Condition Monitoring System**, simply ensuring minimum flow conditions in the oil that is monitored.

OilWear® S100



Your partner in reliability

APPLICATIONS

- Component wash fluids
- Cutting fluids
- Aqueous solutions
- Coolants
- Water glycols
- Mineral and synthetic oils
- Hydraulic and lubricating fluids
- Fuels



BENEFITS

- Plug & Play, the sensor offers a standard output with single plug.
- Output: ISO 4406, NAS 1638, SAE AS4059, etc.
- Classification of particles of over 20 µm depending on their root cause: fatigue, sliding, cutting.
- Early information on the state of the machine is provided.
- It prolongs the life of the fluids and cuts machine downtime.
- It provides rapid, reliable information on the contamination of the fluids.
- Full integration with SCADA/PC/PLC by means of analogue and digital communications.
- Self-diagnosis, self-calibration and self-compensation.
- Possibility of stipulating warning levels.
- Possibility of stipulating the size ranges of the particles to be counted.
- Possibility of integrating with OilHealth®, whereby a single sensor provides information on oil degradation and contamination.

SPECIFICATIONS

OilWear® S100

MEASURED VARIABLES	Particle classification according to: ISO 4406:1999 // SAE 4059 ISO4406:1987 // NAS 1638 Particle Classification according to SHAPE and SIZE · Fatigue wear · Sliding wear · Cutting wear
CALIBRATION	ISO 11171
PRECISION	±1 ISO code
ADDITIONAL VARIABLES	Sensor Temperature Air Bubble detection
MOUNTING POSITION	Vertical
SUPPLY VOLTAGE	24 V
POWER CONSUMPTION	<1A
ANALOG OUTPUT	0-10 V (4-20 mA) [Upon Request]
DIGITAL OUTPUT	RS485 (ModBUS: RTU) Ethernet RJ45 (ModBUS: TCP/IP, FTP, Telnet)
ALARMS	3 configurable alarms (level) [Upon Request]
OPERATING PRESSURE	Maximum 20 bar
OPERATING TEMPERATURE	From 0°C to 70 °C
VISCOSITY RANGE	To 460 cSt
FLOW RATE	Self-regulated
SENSOR SIZE/WEIGHT	250 x 175 x 115mm / 3.000 gr
HYDRAULIC CONNECTIONS	1/8" BSP (x2)
MATERIALS	Stainless steel
MEMORY	Last 500 samples (measurement and sample image)
PROTECTION CLASS	IP65
CERTIFICATIONS	CE, GL pending

DIMENSIONS

