FLUID CONDITIONING UNIT FOR ACCELERATED OIL AGING

The innovative tool to accelerate lubricant aging and investigate their change of properties

FLUCOIL is designed to study the changes of lubricant properties during their lifetime.
This innovative test rig also allows **comparing lubricant formulations** while **speeding-up the aging process.**

The equipment can be programmed to simulate lubricant conditions in real mechanical systems such as internal combustion engines, e-powertrains, gearboxes, industrial transmissions, compressors, and other mechanical systems.

FLUCOIL offers the following **functionalities**:

- **Selectable operating temperature** between 0°C and 160°C (up to 250°C as an option)
- Forced **oxydation process** by mixing air to oil at selectable and controlled rates. Injection of other oxyding gases such as NOx is also possible
- Forced **mechanical shear** using gear pumps that are operated at programmable speeds and loads to generate high pressure in the oil circuit, and allow the injected gas to be dissolved
- Possibility to inject continuously fuel or water-based contaminants (coolant) to simulate a **dilution process**
- Possibility to inject soot (black carbon) and / or micrometric **metal debris**

CONTACT US

PHONE:
+32 (0) 69 64 06 04

E-MAIL:
infos@deltabeam.net

ADDRESS:
Rue Mont d'Orcq, 3
7503 Froyennes
Belgium

WEBSITE:
www.deltabeam.net

A range of **smart probes** is available to monitor critical parameters such as:

- Viscosity
- Dielectric constant
- Resistivity
- TAN / TBN
- Aeration properties (measurement of dissolved and non-dissolved fractions)
- Concentration in wear debris

Oil samples can also be taken periodically to measure additional oil properties in a laboratory, or to perform tribology tests at different periods during and after the aging process.

FLUCOIL is equipped with a range of smart probes to investigate oil quality during the aging process.

TIME AND ENERGY SAVINGS

Compared to real mechanical systems, **FLUCOIL** reduces significantly test durations and allows saving significant amounts of energy.
The equipment only requires electricity supply.
Energy consumption in the range of 1 kWh per litre of oil and per hour of test.
As test durations of are **typically reduced to 50 hours**, this means that less than 250 kWh energy consumption is required to age 5L of lubricant.

AUTOMATION

FLUCOIL is fully PLC controlled.

Equipment is operated using a local handheld HMI where operating conditions are easily programmed:

- Test duration
- Number of cycles
- Oil temperature range
- Air/Gas injection rate
- Fuel injection rate