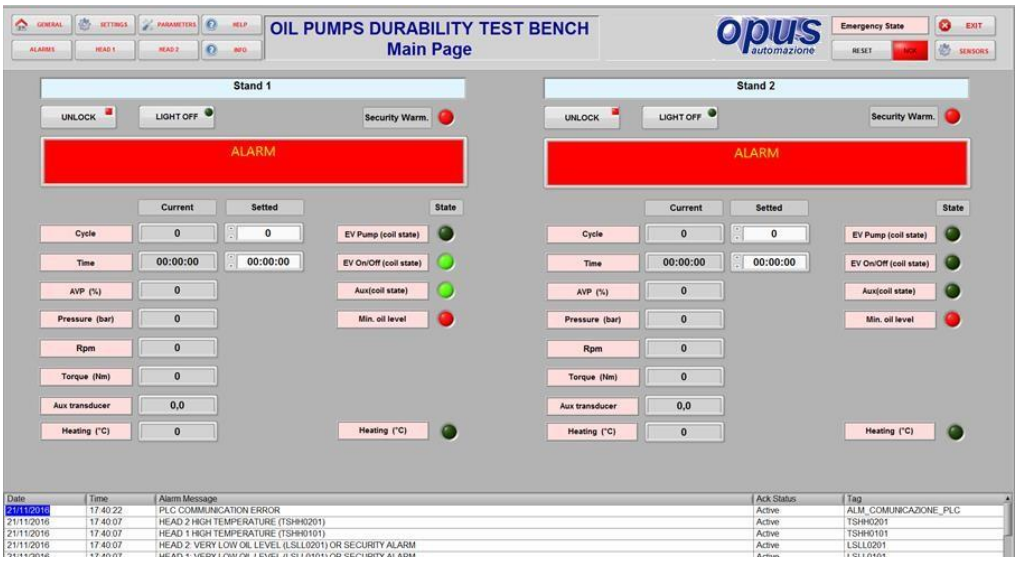
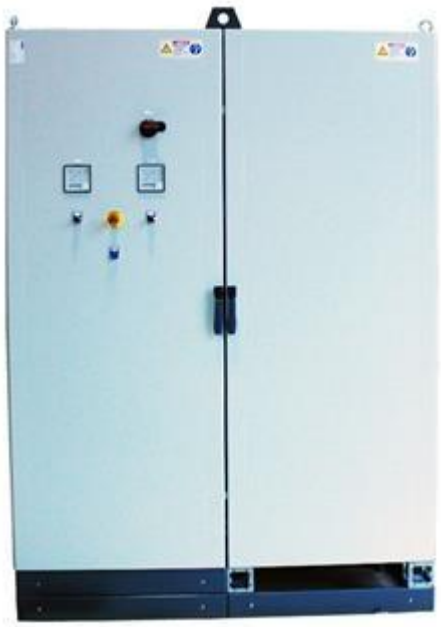
Single/Double Head Oil Pump Durability Test Bench





DTB- 02H

Machine Description:
The benches for oil pumps/water pumps and electrical oil pumps, are designed for both durability and characterization tests. The hydraulic system and the drive/feed system, as well as all the electrical, mechanical and hydraulic interfaces with the devices under test are realized according to end customer's technical specifications. The oil used during tests can be thermally conditioned to simulate the real conditions of use for the test pump. Regarding the electric pumps, the bench is equipped with a power source for the pump under test, which can be completely managed by the control system. The system is arranged to interface with popular standard protocols (LIN, CAN, etc.). The bench is available with single or double head.

Technical Specifications:

A. Main Technical Parameters (for each head)

- Main oil Tank Capacity: 100 Liters;
- Oil Temperature range: from ambient temperature to 150°C; (-20°C optional with external cooling unit);
- Max pressure capability: 20 Bar;
- Nominal diameter of main hydraulic line: DN25;
- Hydraulic Load Simulation: by solenoid valve (fully open or fully close) and proportional valve;
- Pressure Transducer accuracy: 0.2%-100%FS;
- Maximum heating rate: 1°C/min;
- Maximum main motor speed: 7000 RPM (the motor is equipped with encored for closed loop speed);
- Maximum speed ramp: 1000RPM/sec;
- MAXIMUM main motor torque: 20NM@7000RPM
- Vaccum test functionality (option)
- Head inspection glass with external LED light;
- Electrical socket with adjustable voltage for drive pump on board solenoid valve;
- Oil heat safety: hardware safety by minimum oil level switch and maximum temperature switch;
- Safety interlock for canopy opening when the head still in running;
- Umbilical interconnection cable L=20m (other lengths are available)

B. Control and data processing software features:

- Advanced software automation with Advanced HMI interface.
- The HMI allows the complete management of the bench, allowing the management of the test recipes and displaying the status of the tests in progress. In addition, the HMI interface, allows the display of alarms and/or system alerts;
- Recipe and operation cycles creation allows saving recipes on file;
- Automatic stop of the running test in case of exceeding the threshold of pressure/torque /temperature;
- Automatic data backup during the test in CSV/Excel files;
- Possibility of calibration of the sensors through calibration coefficients;
- Possibility of performing tests in "free running" mode.

C. Standard parts:

- Mechanical assembly;
- Electrical cabinet;

D. Extra charge

- Data analysis special computer: HP machine;
- Windows 7 HMI Advanced Software