

TEST BENCH FOR HIGH PRESSURE WATER PUMPS FOR SPRAYING AND CLEANING



General features

Test stand for volumetric plunger pumps for industrial and agricultural use

Test of pumps with or without internal valve of pressure regulation

Max power: 30 KW

Built-in electric motor for pump driving with speed range 500 to 2400 RPM

Max delivery 24 m³/h

Automatic valve for delivery water pressure regulation 0 to 100 bar

Automatic valve for vacuum regulation in suction port

Stainless 2 cubic meter tank

Vertical positioning system for pump shaft alignment and fastening to driving motor

Hydraulic system to automatically fill up pump with oil during test

Fast hydraulic connections with standard threads

Anti-noise and safety panels

Computer and software for control, data acquisition and test reports printing



Mechanics Mechanical equipment made of painted iron composed by a driving electric motor, an adjusting surface for pump fixing, (optional) a torque sensor mounted between 2 joints, safety protections. The speed of the motor can vary from 500 to 2400 RPM, max power is 50 KW

Valves, tank, piping , Stainless steel-2cm³ tank with anti-turbulence internal diaphragm, covering top, drain valve. PLC-controlled automatic adjusting valves mounted on suction port of the pump for vacuum and capacity variation

PLC-controlled automatic adjusting valves mounted on delivery port of the pump for pressure control, range 5-100 Bar, Kv=24 CM/H

Tank: 2 cubic meter stainless steel tank, size mm 1000 x 2000 x 1000 H - square section with support structure, valves, pipe supports, anti-turbulence internal wall, lid, circular open top with fan ready frame for extracting smoke and odors from the tank.

Set of pipes with 4 valves of the flow / pressure The valves are, for each test:
On delivery port: brass proportional valve for pressure / flow adjusting, ND 40, range 5-100 bar pressure regulating, flow coefficient KV 24 MC / h, 0..10 Vdc control signal.

On suction port: 1 ball valve 2-way for vacuum adjustment, ND 65 PN 16 wafer type, complete with electropneumatic positioner controlled by signal 4 .. 20 mA

Piping includes flanges, flanges, supports for the bath.

Flexible piping allows for easy connection of the pumps being tested

Rapid joints

No 3 rapid manual threaded water joints: 1 "1/4 male Gas pressure 20 bar max - plastic, 1" male Gas pressure 50 bar max - steel, 1/2 "Gas Male max 70 Bar – steel

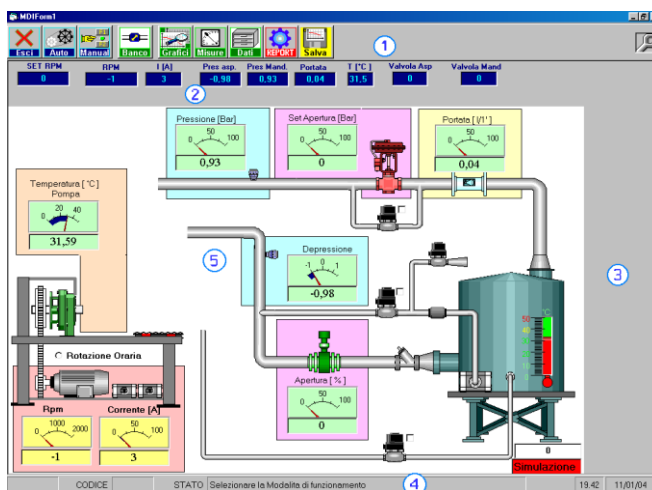
Safety guard

Made of aluminum and Lexan against spray, stray items for accidental water bursts and excessive noise. They are equipped with a transparent access to the pump under test and has an electric lock that blocks the opening of the door as long as the engine of the chassis is not stationary (zero turns)

Sensor Magnetic flow meter ND 40 PN 40 Class 0.5 with 4..20 mA analog output and LCD display Pressure transducer in delivery port 200bar G class 0.15 Vacuum transducer range -800 mBar to 1Bar G class 0.15 (Optional) 200 Nm torque sensor for on-axis power measuring

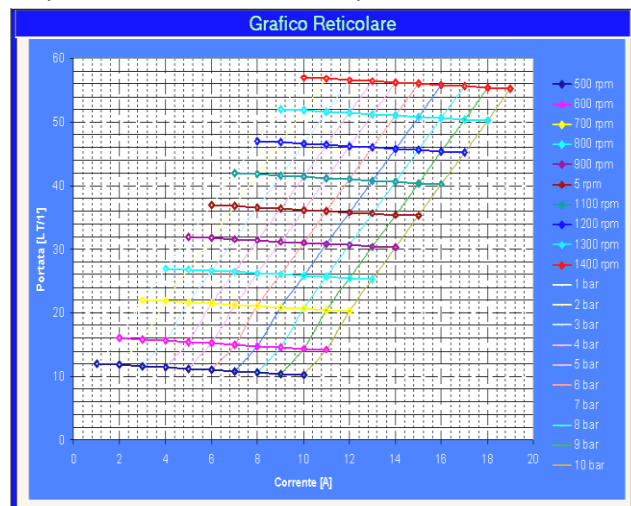
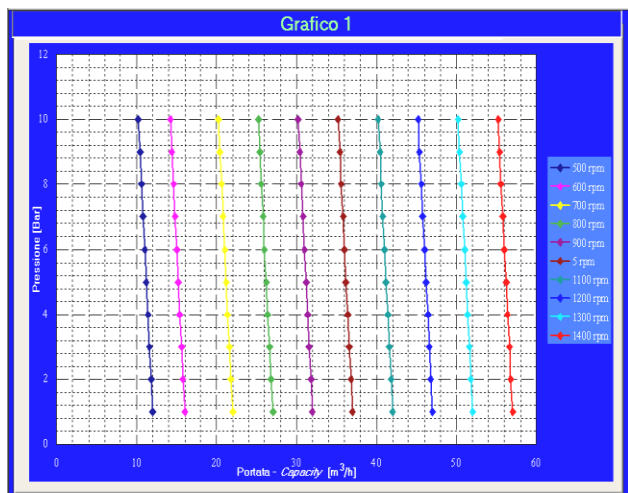
Oil input and suction system

It allows the filling of the pump with oil through an oil pump, an input and an aspiration (for the excess oil during the test)



Hardware e software for contro and data acquisition

The control and data acquisition system is based on National Instruments hardware with an adequate number of digital and analog inputs and outputs and a personal computer with software developed in LabVIEW. In



addition to the automatic execution of sequences of the bank, the software on PC allows the management of various database-related testing (nominal pump data, types of tests, the data of performed tests), the user interface, the window of the process, graphs, print reports