

The experiences learned in TEST BENCHES realization acquired, has push us to extend our automation range until to the complete whole PRODUCTION LINES supply (U-shaped or developed in continued line).

Each line realized may include assembly stations (manual or semi-automatics), functional testing stations of final product constructed (household appliances, compete coffee machine or any subgroup).

The tests studied can be summarized as follow:

- **Tightness tests:** ability to maintain fluids under pressure or in free fall (air and water)
- **Functional tests:** check the correct assembly of the components and the correct intervention of the safety components in critical conditions
- **Flow checks:** detection of obstructions or crushing of hidden pipes
- **Temperature Test:** verification of temperature range during work of any component
- **Strength or effort Test:** verification of power necessary to carry out any operation on a product (grinding, dosing or other functions)
- **Protective earth checks:** verification of compliance with current regulations (Legislative Decree 81/08, Ministerial Decree no.37 of 22 January 2008, CEI 64-8 / 4 standard) to keep the masses at ground potential in conditions of normal use, creating protection by grounding
- **Current test:** verification of minimum and maximum current absorption in components subject to frequent start and stop cycles

The tests are assisted by automated stations whose task is to reduce the repetitive operations required of skilled labor in the stages of setting up and completing the test cycles.

The PRODUCTION LINE and their automatic TEST STATIONS are managed by dedicated software, written and compiled by our electronic engineering department, to complete the control phases of the tests and for the analysis of the results obtained.

The data stored during each assembly operation may be stored, combined with each product commercial ID (normally at the end of the line before packaging) in every Customer's Data Base for traceability functions, through dedicate software (by OPC UA or any other standard protocol) made by our Information technology department.

