

Microline

Tests since 1986

Since 1986 Microline has been creating systems and equipment for electrical safety and functional tests to .verify conformity to any required standards, international Norms and company parameters

The equipment is designed and assembled to customer's specific needs; in this way it adapts perfectly to the different types of products to be tested, for line-end tests, laboratory tests, quality control, including the .possibility to integrate with production lines

First of all the employment of test equipment is necessary to comply the product with normatives and standards, but the result is also a higher quality product, with financial advantages for the company as well as .in terms of image

SOFTWARE & HARDWARE

The software, hardware, electromechanics and pneumatics of each piece of equipment are developed by .Microline

The technologies employed are advanced and flexible, software is customized and can be integrated perfectly into the company's computerized information structure, and they can control every process and provide .reports, information and statistics

STAFF

Our eclectic, creative engineers have gained a great deal of experience from their many years of study and .work and can solve many hardware and software problems involving a varied range of sectors

.The ability of our technical staff also guarantees understanding of customer's needs

.The company has an open structure, attentive to the new needs that the market continuously imposes

Test benches for life tests on boilers and their components

Life tests on boilers

Microline equipment for **life tests on boilers** is semi-automatic, modular and suitable for **laboratory tests**.

The equipment submits boilers to heavy-duty life cycles, accelerating wear on them.

The benches are made up of modules of four units; each unit provides hydraulic connection for heating,

domestic hot water and gas boiler circuits.

The boiler heating circuit can be filled with water treated to further accelerate the aging process on the boiler being tested.

The thermic load to the boiler is provided by suitably proportioned braze welded plate heat exchangers which are easily replaced.

Life tests on boiler components

This equipment, like that for boiler life tests, also submits components for boilers to a heavy-duty life cycle.

The bench is made to connect a number of components simultaneously and is used to submit them to accelerated thermic stress cycles.

The benches are used to detect critical components and check improvements made to their design.



MEASUREMENTS AND TESTS AVAILABLE

Gas and water flow
Typical boiler temperatures
Automatic count of thermic stress cycles

Gas Appliances and Heating

Boilers, burners, cookers, ovens, cooking hobs, ecc.

Our testing equipment for burners and heaters is automatic and modular and is therefore suitable for both automatic in-line production tests and laboratory tests to check compliance with the relative standards for gas appliances.

Some of our test solutions



Laboratory - Boilers



Line-end - Boilers



Quality - Boilers



Leak and flow - MPLeak e MPFlow



Burners



**HL100 for
Heat exchangers**



**Nitrogen Charge for
Heat exchangers**



**ESC with Workstation
Industrial Cookers**



Gas Charging System



LF Series

Boilers Quality Test on the Production Line

Microline equipment for **line-end quality tests on boilers** is automatic, modular and designed for **automatic tests on the production line**, guaranteeing conformity with norms and standards and efficiency for 100% production.

They are also used to test samples to check that the functional characteristics of the product correspond to those of the design.

As the instruments used are highly accurate, the test equipment is able to carry out normal end of line tests, as well as more thorough quality tests (efficiency, combustion, etc.) to check true correspondence to the nominal characteristics declared by the manufacturer.



MEASUREMENTS AND TESTS AVAILABLE

- Earth connector efficiency
- Insulation resistance
- Dielectric strength
- Absorbed power
- Gas/hydraulic circuit leak
- Gas flow rate
- Nozzle pressure measurement and regulation
- Check on safety thermocouple cut-in
- Flame simulation and flame detection
- Pressure, gas temperature and environment temperature measurement
- Time measurement of gas stop with no flame
- Check on closure of burner gas test port
- Test on bulb thermostat through automatic temperature regulated test pit
- Gas flow min and max measurement and regulation
- Heating circuit modulation
- Domestic hot water circuit modulation
- Gas supply pressure measurement
- Fume temperature reading
- Chimney obstruction safety cut-in

Domestic hot water temperature
Gas valve coil current

Line-End Boilers Test

Microline equipment for **line-end boilers test** is automatic, modular and designed for **automatic tests on the production line**, guaranteeing functionality and checking conformity with norms and standards for gas appliances.

The equipment for boilers test makes a 100% check on production, to acceptability criteria declared by the manufacturer.

Checks can be made on gas circuit, heating circuit and domestic hot water circuit of each single component (pumps, fans, thermostats, etc.), as well as boiler control units.

The boilers test system's extreme flexibility makes it possible to create dedicated programs for each model of boiler.

Traceability of the test results allows statistical analyses to be made.



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