

## BOILERS TESTING EQUIPMENT

### LINE-END BOILERS TEST EQUIPMENT

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 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.

#### AVAILABLE MEASUREMENTS AND TESTS

EARTH CONNECTOR EFFICIENCY  
INSULATION RESISTANCE  
DIELECTRIC STRENGTH  
ABSORBED POWER  
GAS FLOW MIN. AND MAX. MEASUREMENT AND REGULATION  
PRESSURE, GAS TEMPERATURE AND ENVIRONMENT TEMPERATURE MEASUREMENT  
HEATING CIRCUIT MODULATION  
DOMESTIC HOT WATER CIRCUIT PERFORMANCE  
TIME MEASUREMENT OF GAS STOP WITH NO FLAME  
GAS SUPPLY PRESSURE MEASUREMENT  
SAFETY SMOKE DETECTOR



### LABORATORY BOILERS TEST EQUIPMENT

MICROLINE LABORATORY BOILERS TEST EQUIPMENT IS SEMI-AUTOMATIC AND MODULAR AND GUARANTEES FUNCTIONALITY AS WELL AS CHECKING CONFORMITY TO GAS SYSTEM STANDARDS.

THE EQUIPMENT TESTS BOILERS WITH ATMOSPHERIC BURNERS, CONDENSATION TYPES AND BOILERS WITH A POWER RATING OF NO MORE THAN 50 KW.

THE BOILERS TEST EQUIPMENT IS USED TO MEASURE ALL THE PROCESS VARIABLES WITH PRECISION INSTRUMENTS TO CHECK OPERATION OF THE BOILER. IT IS ALSO USED TO CARRY OUT MOST OF THE TESTS REQUIRED BY STANDARDS: UNI EN 89, UNI EN 297, UNI EN 483, UNI EN 13203

ALL PARAMETERS, TEST SEQUENCES, RESULTS AND MEASUREMENT GAUGING ARE RUN BY A PC WITH OPERATOR INTERFACE.

NUMERICAL AND GRAPHICAL PRESENTATION OF THE RESULTS IS A VALID AID IN DEFINING IMPROVEMENTS TO BE MADE IN DEVELOPING THE PROJECT.

#### AVAILABLE MEASUREMENTS AND TESTS

ABSORBED POWER  
CHECK ON SAFETY THERMOCOUPLE CUT-IN  
PRESSURE, GAS TEMPERATURE AND ENVIRONMENT TEMPERATURE MEASUREMENT  
DOMESTIC HOT WATER CIRCUIT PERFORMANCE  
CALCULATION OF HEAT INPUT  
CALCULATION OF USEFUL EFFICIENCY  
COMBUSTION TEST (AT NOMINAL HEAT INPUT AND AT PARTIAL LOAD)  
CALCULATION OF THE WEIGHTED NOX VALUE



## QUALITY TEST EQUIPMENT – BOILERS 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 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 TESTS (EFFICIENCY, COMBUSTION, ETC.) TO CHECK TRUE CORRESPONDENCE TO THE NOMINAL CHARACTERISTICS DECLARED BY THE MANUFACTURER.

### AVAILABLE MEASUREMENTS AND TESTS

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



## FLOOR STANDING BOILERS TEST EQUIPMENT (ATMOSPHERIC-BLOWN AIR BURNERS)

MICROLINE BURNER TESTING EQUIPMENT IS AUTOMATIC AND MODULAR, DESIGNED FOR IN-LINE TESTS, AND GUARANTEES FUNCTIONALITY AS WELL AS CHECKING CONFORMITY TO GAS SYSTEM STANDARDS.

BURNER TESTING IS USED TO CHECK PROPER ASSEMBLY OF A BURNER, THE WIRING BETWEEN THE CONTROL STATION AND VALVES, BURNER GAUGING AND ITS OPERATION WITH GAS.

### AVAILABLE MEASUREMENTS AND TESTS

ABSORBED POWER

GAS/HYDRAULIC CIRCUIT LEAK

NOZZLE PRESSURE MEASUREMENT AND REGULATION

CHECK ON SAFETY THERMOCOUPLE CUT-IN

FLAME SIMULATION AND FLAME DETECTION

TEST ON BULB THERMOSTAT THROUGH AUTOMATIC

TEMPERATURE REGULATED TEST PIT

GAS FLOW MIN AND MAX MEASUREMENT AND

REGULATION

GAS VALVE MODULATION CHECK

GAS SUPPLY PRESSURE MEASUREMENT



### AND ALSO:

TEST BENCHES FOR LIFE TESTS ON BOILERS AND THEIR COMPONENTS

ASSEMBLING AND TEST EQUIPMENT FOR BOILERS HYDRAULIC POWER UNITS

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