



**MICROTEST, S.A.**  
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**AIR JET EROSION TESTER  
MICROTEST REF. MTD/G76**



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**AIR JET EROSION TESTER  
MICROTEST REF. MTD/G76****Description**

It consists on a shot blasting equipment for determination of material loss due to erosion caused by particle impacts. Abrasive particles are accelerated by air jet. General test parameters are based on ASTM G76-04 standard.

Results obtained with this equipment facilitates determination of erosion wear rate of tested materials under test specific conditions. Importance and meaning of test method in order to characterize the wear behavior of the material depends on many factors related with conditions and test method. Correlation degree between test results using different methods is a user task.

**Equipment**

- Desktop test cabin, with security glass window for observation. Includes interior lighting and lateral entries for handling gloves.
- Abrasive deposit. Feeding through aspiration.
- Compressed air input.
- Air blasting device with WC nozzle (Length: 50mm, interior diameter:1.25 or 1.5mm).
- Working zone (approx. 300x250x180mm) with sample holder for samples according ASTM G76-04 standard (10x30x2mm). Possibility to modify impact angle (up to 80°) and distance between nozzle and sample (typically  $10 \pm 1$ mm).

**General data:****Cabin:**

- Steel sheet (15/10) epoxy painted.
- Particle aspiration system included.
- Sealed security glass for observation.
- Interior lighting.
- Front door and lateral entries for handling gloves. (Neoprene gloves included)
- 4mm steel nozzle for standard air blasting work.
- Air circuit including pressure regulation filter and flow regulator valve.
- Electric pedal activation of air blasting device.
- External dimensions: 360x460x700mm
- Working zone: 300x250x180mm
- Weight: 15kg
- Power consumption:150w
- Required power supply: 220/230 Vac Single phase.
- Maximum air consumption for standard air blasting works: 300l/min 6atm, dry air. Air consumption for testing is always lower. Requires connection to compressed dry air.



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**Additional micro-air blasting unit (R-080251).**

Consist on an additional module for testing under ASTM G76 standard including:

- Special deposit to avoid used abrasive recycling.
- Low pressure regulation with pressure gauge and flow regulation valve to accommodate to ASTM G76 requirements. Allows particle feed speed of 2g/min. (Feeding is measured before the test, by measuring projected abrasive mass in a determined time)
- Special WC nozzle (**50mm length, 1.25 or 1.5mm diameter**). Allows different particle size **50-250µm**.
- Sample holder according ASTM G76-04 standard (**10x30x2mm**). Possibility to modify impact angle (**up to 90°**) and distance between nozzle and sample (typically **10 ± 1mm**).
- **Temporizer** automatically controls test duration.



Easy replacement of nozzles. 4mm and 1.5mm can be changed to work as a standard air blasting cabin or as air jet erosion tester.

Equipment supply includes 25kg abrasive bag (Alumina particles (Al<sub>2</sub>O<sub>3</sub>) 220 grade).

**Temperature control not included. Lab temperature required: 18°C / 28°C.**

**Supply does not include scale for abrasive mass measurement.**

**Compressed air installation required.**

NOTE:

Particle speed considered according ASTM G76 point 9.1.4.

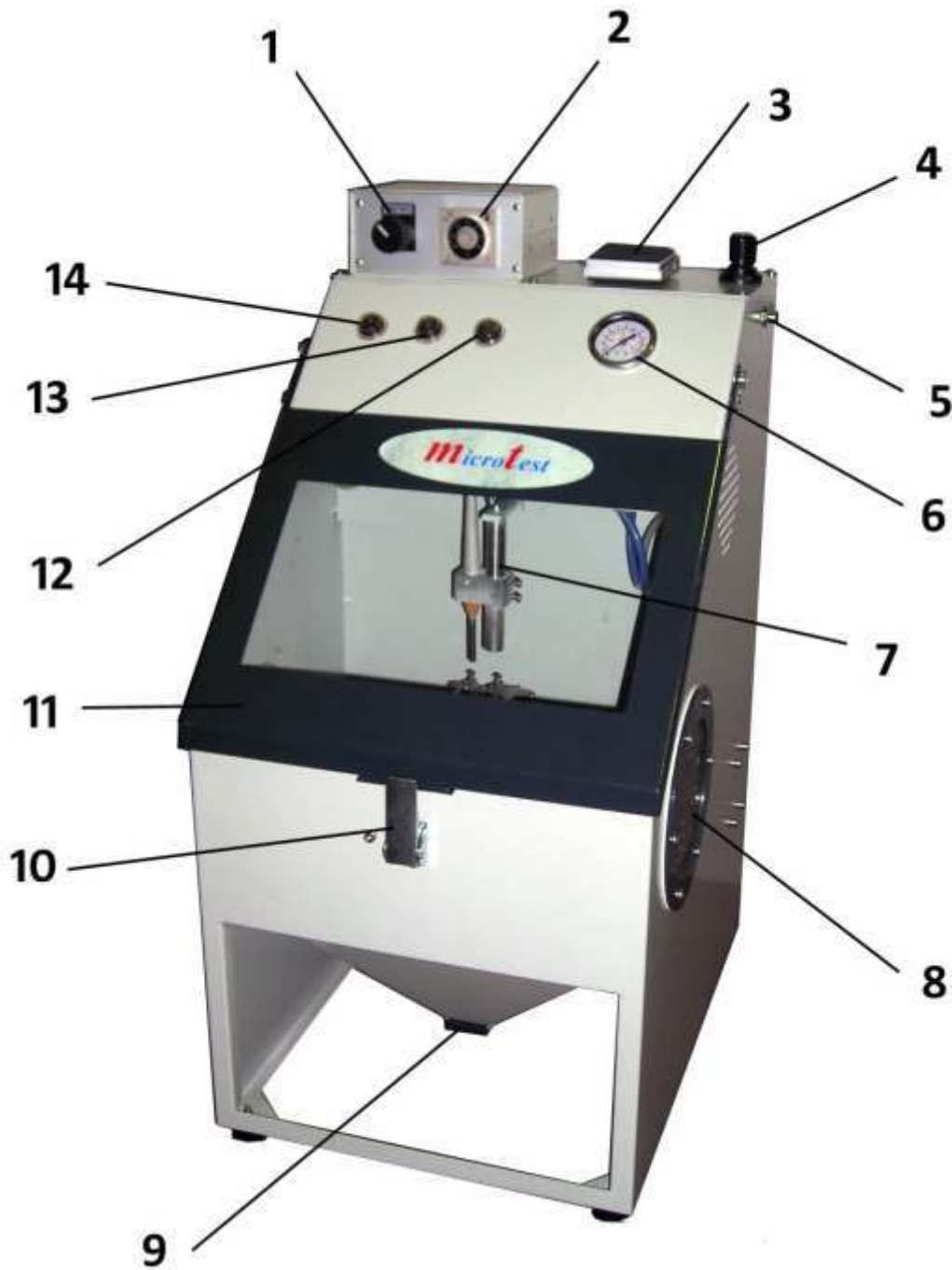
With a specific nozzle of 1.5mm in diameter and 50mm length, an approximate pressure of 140kPa (20 psig), flow speed is around 8L/min for a particle speed of 30m/s.

Feeding speed can be determined gathering them in normal test conditions. Flow speed can be determined with laser velocimetry or double rotary disk if required (**not included in this supply**).



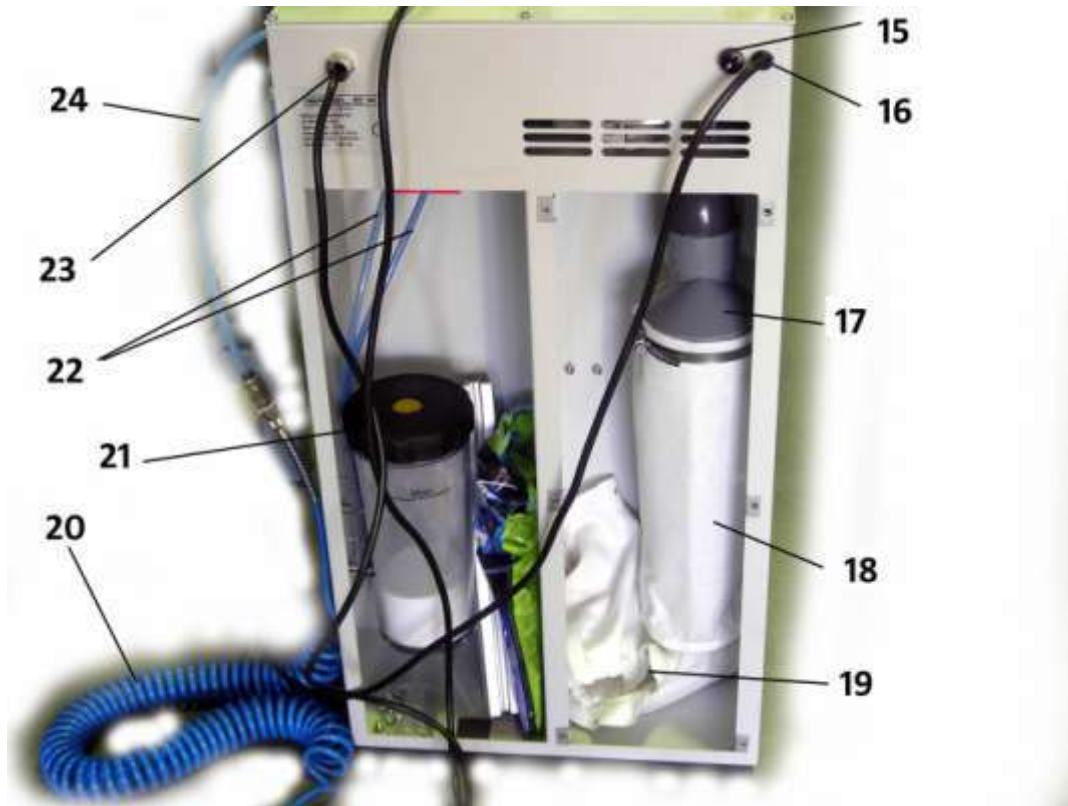
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**TESTING DEVICE**





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1	MANUAL-AUTOMATIC (TEMPORIZED) SELECTOR
2	TEMPORIZER
3	PEDAL ACTIVATOR
4	PRESSURE REGULATOR
5	COMPRESSED AIR INPUT
6	PRESSURE GAUGE
7	WORKING ZONE AND NOZZLE
8	LATERAL ENTRIES FOR GLOVES
9	HOPPER DUMP
10	FRONT DOOR'S LOCK
11	FRONT DOOR - SECURITY GLASS OBSERVATION WINDOW
12	DUST ASPIRATOR SWITCH
13	INTERIOR LIGHTING SWITCH
14	MAIN POWER SWITCH
15	FUSE
16	POWER SUPPLY
17	ASPIRATION HOPPER
18	ASPIRATION FILTER BAG
19	SLEEVES FOR GLOVES
20	COMPRESSED AIR HOSE
21	ABRASIVE DEPOSIT FOR MICRO-AIR BLASTING
22	AIR AND ABRASIVE CONNECTORS
23	PEDAL SWITCH (3) CABLE
24	COMPRESSED AIR CONNECTION