laboratory electronic **Balances**

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ITALY
european quality
Gibertini
a green company

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Printer available on request

GSA model

New instrument for soil particle-size analysis

GSA model – **GRAIN SIZE ANALYSER**

ACCORDING TO ASTM D 422 AND UNI CEN ISO/TS 17892 – 4

PRINCIPAL CHARACTERISTICS:

1-Range of density (specific gravity) from 0,9000 to 1,0500 with real four decimal figures.

2-Automatic compensation of variation of temperature and Stokes law.

3-Repeatability better than 2 % .

4-All the variable parameters , density of soil, acceleration of gravity, times of data acquisition etc. are programmable by the operator.

GSA (Grain Size Analyzer) allows particle size characterization of soils by measuring the progressive reduction of density in a soil suspension, following particle sedimentation during a given standard time of observation. This instrument uses of the procedure prescribed by ASTM D422 standard norms applied to a modified hydrostatic balance
Paricularly the GSA measures the finer fraction of soil from 0.100 mm to 0.001 mm. measuring density rather than by utilising standard 151H or 152H hydrometers.

The GSA is projected to realize multiple units till 6.

The software of GSA, easy and friendly , displays in real time the trend of the sedimentation and the test through a grafic, giving to the operator before the end of the test, a reliable forecast of a trend useful in many cases to establish in advance the characteristic of the soil under test.
Particularly the GSA measures the finer fraction of soil complete analyse takes 5/6 hours

1

1. mod. GSA – GRAIN SIZE ANALYSER

Standard accessories with magnetic stirrer

- vessel with 500ml reference, plus 1 vessel complete with triangular magnets for stirrer agitation
- floater of 20ml, plus 1 interchangeable in weight and volume
- 1 kit with pan and weight of 100g class E2 for the calibration of the full scale
- series of tools, wrenches and screwdrivers for the installation and maintenance

Standard parmeters all modifiable by operator

- Density of soil: 2,65 g/cm3
- Gravity: 9,80 m/s2
- Sample: 25,00 g
- Barycentre: 80 mm

To prepare the sample – 500 ml

- 25g of soil
- 62 ml of dispersing agent sodium hexametaphosphat at 40%
- Distilled water till 438ml

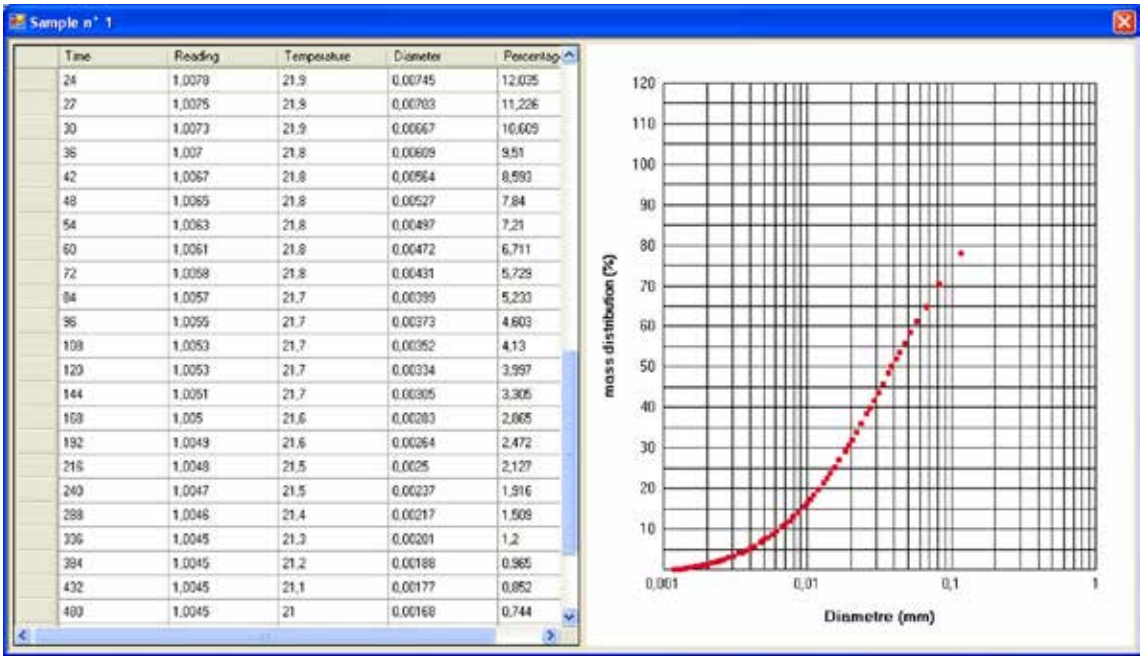
On request:
Printer.

New instrument for soil particle-size analysis

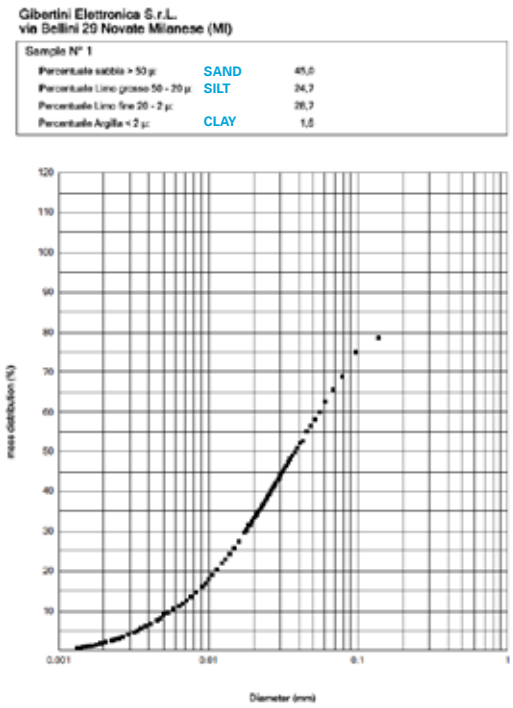
GSA model – **GRAIN SIZE ANALYSER**

EXAMPLES OF DATA DISPLAY

The display is made from two parts: a table of all the readings and the related graphic; both updated in real time every time you acquired a new reading.



At the end of the test you can print out the test results and, for each sample, will be printed summary data and chart:



It is possible to save the data "CSV" to convert in OPEN OFFICE or EXCEL.

Microbalance

MICRO 1000 model

On request:
Ion generator for the elimination of the electrostatic charges.
Printer.

Functions:

Motorized weighing chamber UP/down button to open and close

LCD display with small size digits, for easier and more immediate reading

Waterproof and acid resistant membrane keyboard. Easy to use with the ON/OFF, TARE and MODE keys

Indication of reached stable weight

Bar-graph indicator of dosage and remaining capacity of the microbalance

Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage)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1. Microbalance **2**. Display and Up/Down button **3**. Display with small size digits **4**. Stable weight and bar/graph indicator **5**. Mass, tweezers and antistatic cloth

Technical specifications:

1

Capacity: 1000 mg

Readability: 0.001 mg

Repeatability: ± 0.001 mg

Linearity: ± 0.002 mg

Response time: 6 seconds

Data output: RS232

Pan diameter:
20 mm standard and for filters max 60 mm
(on request: bigger diameter)

Automatic calibration with external mass (supplied with standard equipment)

Functioning temperature: 20°C ÷ 30°C
(corrected with a micro-processor)

Power supply:100/240 VAC

Absorption: 200 mA

Dimensions (WxDxH):215 x 385 x 230 mm

Net weight: 5.2 kg

Standard equipment:

Mass in class E1 for the calibration; tweezers for the mass, antistatic cloth

WATCH VIDEO

E 50 S / 3 model

Magnetic compensation semimicro analytical balance dual range

E 50 S / 3 model

Functions:

Automatic autocalibration with built-in calibration weight

Prepared for weighings under the balance plane

Stable weight determination signal

Acid resistant membrane keyboards.
Parameters configurable by menu:
reading in g (grams), lb (pound), oz (ounce),
ct (carats), pcs (pieces), % (percentage)

Technical specifications:

Reading by LCD display

Bubble and feet for levelling

Pan dimension: diam. 80 mm

Data output: RS232 I/O serial output and USB

Operating temp.: 10°÷ 35°C

Power supply unit: 100/240V

Absorption: 12 VA

Total dimension: W 210, D 340, H 320 mm

Weighing chamber dim.: W 180, D 170, H 220 mm

Net weight: 6,6 kg

On request:
Class E2 masses
Printer
Solids density measuring devices

MODE	CAPACITY g	READABILITY mg	LINEARITY mg	REPEATABILITY ±mg	RESPONSE TIME
SEMIMICRO	100	0.01	± 0.03	± 0.03	6/8 sec.
MACRO	225	0.1	± 0.2	± 0.05	3/5 sec.

Magnetic compensation analytical balances

ETERNITY series

Functions and characteristics

- LCD display with small decimal digits
- Membrane keyboard, water proof and solvent resistant, easy to use with TARE, ON/OFF, PRINT and MODE keys
- Indication of the reached stable weight
- Bar-graph indicator of dosage and remaining capacity of the balance
- Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage), mo (Momme), t (Tola), ozt (Troy ounce), GN (Grain), tLH (Tael Hong Kong), tLT (Taiwan).
- Full scale automatic calibration with internal and/or external mass on request
- Weighing underneath the balance
- Selectable response time "fast/slow" (see table)
- Glp compliant

Technical specifications

Data output: RS232 I/O adjustable

Operating temperature: 10° ÷ 30°C

Power supply: 100 ÷ 240 VAC

Power consumption: 200 mA

Dimensions (W x D x H): 215 x360 x 310mm

Weighing chamber dim. (W x D x H): 180 x 150 x 240 mm

Net weight: 7 kg

On request :

Executions with special capacity

Liquids and solids density measuring devices

Printer

Remote command to activate various signals: print, tare, etc.

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MODEL	CAPACITY g	READABILITY mg	LINEARITY mg	REPEATABILITY mg	RESPONSE TIME	PAN mm	CALIBRATION
ETERNITY 100 CAL	110	0,1	± 0,2	± 0,05	4/6 sec.	Ø 80	Internal
ETERNITY 200 CAL	220	0,1	± 0,2	± 0,05	4/6 sec.	Ø 80	Internal
ETERNITY 300 CAL	310	0,1	± 0,2	± 0,05	4/6 sec.	Ø 80	Internal

1. Balance with printer **2.3**. Software for density, Standard deviation, piece counting, percentage. **4**. Rear side **5**. Easy access to the levelling bubble.

Magnetic compensation analytical balances

CRYSTAL series

Functions and characteristics

LCD display with small decimal digits

Membrane keyboard, water proof and solvent resistant, easy to use with TARE, ON/OFF, PRINT and MODE keys

Indication of the reached stable weight

Bar-graph indicator of dosage and remaining capacity of the balance

Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage)

Full scale automatic calibration with internal and/or external mass

Weighing underneath the balance

Selectable response time "fast/slow" (see table)

Technical specifications

Data output: RS232 I/O adjustable

Operating temperature: 10° ÷ 35°C (optimum 18° ÷ 28°C)

15° ÷ 25°C for models with CE mark (Legal metrology)

Power supply: 100 ÷ 240 VAC

Power consumption: 200 mA

Dimensions (W x D x H): 216 x380 x 335xmm

Weighing chamber dim. (W x D x H): 180 x 150 x 200 mm (except for mod. CRY 500 CE/C that has a glass cylinder)

Net weight: 7 kg

MODEL	CAPACITY g	READABILITY mg	LINEARITY mg	REPEATABILITY mg	RESPONSE TIME	PAN mm	CALIBRATION
CRYSTAL 100 SMI	110	0,1	± 0,2	± 0,05	6/10 sec.	Ø 80	External
CRYSTAL 100 CAL	110	0,1	± 0,2	± 0,05	6/10 sec	Ø 80	Internal
CRYSTAL 200 SMI	210	0,1	± 0,2	± 0,05	6/10 sec.	Ø 80	External
CRYSTAL 200 CAL	210	0,1	± 0,2	± 0,05	6/10 sec.	Ø 80	Internal
CRYSTAL 300 CAL	310	0,1	± 0,2	± 0,05	6/10 sec.	Ø 80	Internal
CRYSTAL 500 CAL	510	1	±2	± 1	5/8 sec.	Ø 110	Internal
CRYSTAL 500 CE/C	510	1	± 2	± 1	5/8 sec.	Ø 110	Internal
CRYSTAL 1000 SMI	1010	1	± 2	± 2	5/8 sec.	Ø 110	External

On request :

CE version (legal metrology) according to Directive 2009/23 EC (only for "CAL" models)

Executions with special capacity

Liquids and solids density measuring devices

Printer

Remote command to activate various signals: print, tare, etc.

1. Analytical Balance Crystal **2**. Three sliding doors **3**. Keyboard **4**. Rear side

4

Load cell technical balances

EU - C LCD series

Functions:

LCD display with small-size decimal digits, for easier and more immediate reading

Waterproof and acid resistant membrane keyboard. Easy to use with the ON/OFF, TARE, MODE and PRINT keys (RANGE/PRINT for DR model)

Indication of the reached stable weight

Bar-graph indicator of dosage and remaining capacity in % of the balance

Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage)

Technical specifications:

Automatic end of range calibration (with external mass supplied on request)

Memory of the current weight in case of power failure

Enhanced anti-shock system

Body made of die-casted alloy and ABS

Load cell nearly unbreakable and without transportation problems

Data output:RS232 or USB (see table)

Operating temperature: 10°C÷ 40° C

International power supply unit:100 ÷ 240 VAC

Battery range:12 hours ~ (only "BP" models)

Recharge: 8 hours ~ (only "BP" models)

Dimensions (W x D x H): 215 x 330 x 95 mm

Weight: 3 Kg ~

On request:

0.5, 1, 2 and 5 kg masses in class F1 for calibration

Device for the determination of the density of solids

International power supply: rechargeable batteries for models "BP"

Printer

Rigid transparent cover for protection against acids, paints, etc.

Special executions on request

MODEL	CAPACITY g	READABILITY g	LINEARITY ±g	REPEATABILITY ±g	RESPONSE TIME	PAN mm	DATA OUTPUT
EU-C 802 USB	820	0.01	0.05	0.02	2 s	150x150	USB
EU-C 2002 RS	≥ 2000	0.01	0.02	0.01	2.5 s	150x150	RS 232
EU-C 2002 USB							USB
EU-C 2002 RS-BP							RS 232
EU-C 4000 USB	4200	0.1	0.3	0.2	2 s	ø 190	USB
EU-C 4002 RS	4200	0.01	0.02	0.02	2.5 s	150x150	RS 232
EU-C 4002 USB							USB
EU-C 4002 RS-BP							RS 232
EU-C 7500PQ RS	7500	0.1	0.3	0.3	2 s	190x190	RS 232
EU-C 7500PQ USB							USB
EU-C 7500PQ RS-BP							RS 232
EU-C 7500PT RS	7500	0.1	0.3	0.3	2 s	ø 190	RS 232
EU-C 7500PT USB							USB
EU-C 7500PT RS-BP							RS 232
EU-C 7500DR RS	950	0.01	0.05	0.02	2 s	ø 190	RS 232
EU-C 7500DR USB	7500	0.1	0.3	0.2	2 s		USB
EU-C 7500DR RS-BP							RS 232
EU-C 10000PT RS	10200	0.1	0.3	0.3	2 s	ø 190	RS 232
EU-C 10000PT USB							USB
EU-C 10000PT RS-BP							RS 232
EU-C 15000PT RS	15000	0.5	0.5	0.5	2 s	260x260	RS 232
EU-C 15000PT USB							USB
EU-C 15000PT RS-BP							RS 232

Magnetic compensation toploading balances

CENT series

Functions:

LCD display with small decimal digits

Membrane keyboard solvent proof; easy to use with TARE, ON/OFF, PRINT and MODE keys

Indication of the reached stable weight

Bar-graph indicator of the remaining capacity of the balance even after the zero taring over the whole range

Weighing underneath the balance (for models 10000 and 10000HR only on request)

Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage).

Technical specifications:

Data output: RS232 I/O baud rate and parity adjustable

Operating temperature:10°÷ 40°C (optimum 15°÷ 30°C)

Power supply: from 100 to 240VAC

Power consumption: 200 mA

Dimensions (WxDxH): 215x355x110mm

Net weight: 5,2 kg

On request:

Executions with special capacity

Printer

Remote command to activate various signals: print, tare, etc.

Solids density measuring devices


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MODELLO	CAPACITY g	READABILITY g	LINEARITY g	REPEATABILITY g	RESPONSE TIME	PAN mm	CALIBRATION MASS
CENT 203	210	0.001	± 0.002	± 0.001	~ 3 sec.	Ø 110	External
CENT 2000	2200	0.01	± 0.01	± 0.01	~ 3 sec.	160x160	External
CENT 2000CAL	2200	0.01	± 0.01	± 0.01	~ 3 sec.	160x160	Internal
CENT 2000 CE*	2200	0.01	± 0.01	± 0.01	~ 3 sec.	160x160	Internal
CENT 4000	4200	0.01	± 0.02	± 0.01	~ 3 sec.	160x160	External
CENT 4000CAL	4200	0.01	± 0.02	± 0.01	~ 3 sec.	160x160	Internal
CENT 4000 CE*	4200	0.01	± 0.02	± 0.01	~ 3 sec.	160x160	Internal
CENT 6000	6300	0.1	± 0.1	± 0.05	~ 3 sec.	Ø 190	External
CENT 6000CAL	6300	0.1	± 0.1	± 0.05	~ 3 sec.	Ø 190	Internal
CENT 6000 CE*	6300	0.1	± 0.1	± 0.05	~ 3 sec.	Ø 190	Internal
CENT 6000HR	6300	0.01	± 0.02	± 0.01	~ 3 sec.	Ø 150	External
CENT 10000	10200	0.1	± 0.1	± 0.05	~ 3 sec.	Ø 190	External
CENT 10000 HR	10200	0.01	± 0.05	± 0.02	~ 3 sec.	Ø 190	External

* * CE metrologic version, according to EEC Directive 2009/23


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1. Balance model Cent **2**. **3**. Keyboard, Square Pan **4**. Rear side with RS232 **5**. Balance model **Cent 203**

EUROTHERM model

Electronic moisture balance

EUROTHERM model

Functions:

Max Sample Weight : 200 g

Not need of an exact sample amount

Display for Moisture Content (%) or Weight (g)

Displays for Time (min) and Temperature (°C)

All parameters programmed by keyboard

Time of tests programmable by 1 min steps

Furnace temperature programmable by 1 degree steps

Memory facility to retain Temperature, Time, Weight, Dry Residue and Moisture data until cancelled by the operator

Automatic Stable Weight determination and data storing at the end of the test

Software for memorisation of 5 cold weighings

Automatic stop at the end of the test with buzzer

Automatic calibration with external mass (optional)

Technical specifications:

Capacity: 200 g

Readability:1 mg

Linearity: ± 1 mg

Repeatability: ± 0,5 mg

Sample weight: min 140 mg
max 200 g

Operating Temperature: 10°÷ 40°C

Timer Range: 1 ÷ 999 minutes

Furnace Temp. Range: 50°÷ 180°C

Moisture accuracy: ± 0.01 % (sample min. 10 g)

Moisture resolution: 0.01 % (sample min. 10 g)

Data output: RS232 I/O adjustable

Pan diameter: 120 mm

Power requirements: 230 VAC (-15%/+10%)
50 Hz - 2A - 350 Watt

Dimensions (W x D x H): 210 x 355 x 300 mm

Net weight: 9 Kg

Standard equipment: 3 calibrated and interchangeable stainless steel pans, 100 aluminium foil sheets, 1 pair of forceps

On request:

Calibrated mass E2 or F1 class (with or without certificate) from 50 g to multiples up to a maximum 200 g

Device for weighing underneath the moisture balance to determine humidity < 1%

Printer

Software "SCALE COMM" for data and statistics memorisation


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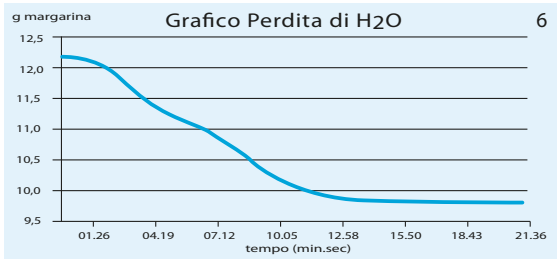

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1. **2**. Oven open **3**. Eurotherm working **4**. Rear side **5**. Keyboard **6**. Automatic Stop at the end of the test

CRYSTALTHERM model

Electronic moisture balance

CRYSTALTHERM model

Functions

Capacity 200 g

Readability 1mg

Repeatability +/- 1 mg

Accuracy +/- 0,01% with minimum weight of 10g

Pan diameter 120mm (3 pans)

Calibration mass 100g class F1

User friendly graphical display for results and product set up

Programmable sampling time from 1 minute to 8 hours

Oven temperature from 40 to 200° C

Fahrenheit/Celsius selected from keypad

Memory to store 10 product testing parameters

TIMER + WEIGHT STABLE sample completion

RS 232 for printing, PC connection etc

Dry residual result selectable

Beeper alarm indicates end of test

Technical specifications:

Power 230 volts / 50 Hz
110 volts on request

Dimensions 21x36x30 cm

Net weight 9 Kg

Ambient working temperature 10/40°C

Standard equipment:

Disposable aluminium pans, 100 aluminium foil disks, forceps

Mass 100g F1

On request:

Printer

Software for data and statistics memorisation

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1.Crystaltherm with the oven open **2**. Oven closed
3. Keyboard

TSD

Digital Tensiometers

TSD model (manual)

Functions:

Digital Tensiometer for liquid surface tension measurement .
The surface tension is determined by the maximum value of the force measured right then at the contact between the sample and the glass or the platinum plate.

Characteristics:

Display of surface tension value mN/m (dyne/cm) measured with Wilhelmy method

Readability: ± 0,2 mN/m (dyne/cm)

Power requirements: 230V - 15% +10% 10VA (on request 110 V)

Dimensions: W 220 x D 355 x H 350 mm

Max capacity: 60 g

Auto-calibration with internal mass

Equipment:

Glass plates (dimensions 24x24x0.15 mm)

Suspension system for the arrangement of the glass plate

Glass container for liquid sample

Manually adjustable lab jack TSD

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On request:

Thermometric probe PT 100 1/3 DIN

ALWAYS SUGGESTED

- operating temperature range: 10-30°C
- repeatability ± 0.05°C
- readability 0.1°C

Platinum Wilhelmy plate *(see picture 2)*

Specific container for thermal stabilisation of the sample, Special pan and masses for metrological control *(see picture 3)*

Platinum Du Nouy ring
the use of the Du Nouy ring grants a better repeatability and precision *(see picture 4)*

Floater and double wall cylinder
for density measurement
(necessary if the Du Nouy ring is used)

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1. Tensiometer mod.TSD with manually jack 2. Moment of contact between plate and liquid 3. Pan for metrological control and thermal stabilization container 4. Du Nouy ring and Wilhelmy plate.

On request:
Printer.

TSD DCA 300 model (automatic)

with automatic jack and WIND DCA 300 software to pilot the jack and to automatically determine the surface tension and the contact angle measurement.

Functions:

- Surface tension measurement with Du Nouy ring according to ASTM and DIN standards and Wilhelmy plate.
- Contact angle measurement
- Interfacial tension
- Absorption/Wicking analysis (for dusts etc.)

Measurement range	
Surface tension:	1-500 dynes/cm (mN/m)
Contact angle:	0-180 degrees
Measurement repeatability	
Surface tension:	± 0.2 dynes/cm (mN/m)
Contact angle	± 0.5 degrees
Sample size:	
Maximum weight:	60 g
Maximum diameter:	75 mm
Stage travel:	
Total range	15 mm
Maximum speed	328 µm/sec
Minimum speed	21 µm/sec

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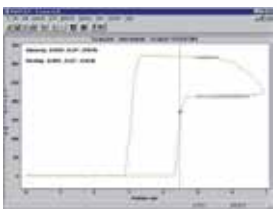


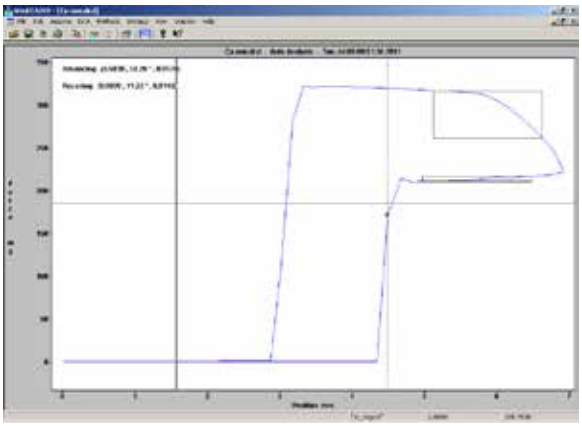
2

1. Windows drop down menus or dialog boxes guide the user through method development step by step
2. Automatic feature allow you analyse a dynamic hysteresis curve, complete with on-screen advancing, receding and zero depth of immersion results for contact angle or surface tension.

Digital Tensiometer

TSD DCA 400 model

Automatic feature allow you analyze a dynamic hysteresis curve, complete with on-screen advancing, receding and zero depth of immersion results for contact angle or surface tension.



General features :

Power source: 230 V -15% +10% by external power supply, 50 Hz

Power consumption: 10 VA

Digital tensiometer:

Display of surface tension value expressed in mN/m (dyne/cm) measured with the Wilhelmy method

Precision: ± 0.02 mN/m (dyne/cm)

Capacity: 1-1000 mN/m resolution 0.01 mN/m

Max capacity: 110 g

Autocalibration with internal mass

Contact angle 0-180 degrees

Equipment:

- Glass plates (dimensions 24x24x0.15 mm)
- Suspended system for the arrangement of glass plate
- Glass container for liquid sample
- Manual adjustable lab jack

Software with the following performances:

a - contemporaneous display on PC:
- force changes during the measurements
- past time
- surface tension value

b - data recording (useful for other elaborations)

c - changing value of perimeter plate (if different from the standard)

d - selection of manual or automatic system for the end of measurement determination

- Automatic jack with programmable speed (from 21 to 328 µm/sec)
- Platinum Wilhelmy plate
- Platinum Du Nouy ring
- Floater calibrated in weight and in volume and double wall cylinder for relative density measurement:
  - range of measure for the density: 0.5 ÷ 2.25
  - readability: 0.00005
  - precision and reproducibility: ± 0.00005

  } g/cm3
- Specific container for sample thermostatation
- Special pan for metrological control
- Thermometric probe PT 100 1/3 DIN:
  - Range of measure: 0-50 °C
  - Accuracy: 0.05 °
  - Readability: 0,1 °C

On request:
Printer.

High precision scales and piece-counting

PTF-D & CPZ-D series

Functions:

Automatic calibration of full-scale by external mass (optional)

Programmable functioning parameters locally and by means of RS232: speed of reading, type of stabilisation, etc

Easily adaptable to environment thanks to a digital filter selectable by the user

Bar-graph indicator for remaining capacity of the balance even after zero taring over the whole range

Sampling: with 10 pieces and multiples up to 100 pieces

Technical specifications :

Solvent proof and easy to use membrane keyboard with ON/OFF, MODE and TARE keys. CPZ-D models also with GRAMS/PIECES commutation key

7 segments display

Stainless steel pans

Structure and base manufactured with oven painted structural steel

Zinc plated mechanical parts

Levelling feet

Magnetic load cell of our production, set on a levers system, protected from dust and splash proof

Data output: RS232 I/O interface

Operating temp.:10°÷ 40°C (optimum15°÷ 30°C)

External power supply: 230 VAC (-15% / +10%) - optional 110 VAC

Power consumption: 14 VA

Net weight: 36 kg

On request:

Device to store in memory the last data in case of power failure

Extensible stainless steel column for reading unit (not available for models CPZ35 ARD and CPZ50 ARD)

Printer

Reading subdivision (with computer, via RS232, it allows the reading with one more decade)

Stainless steel execution, calibrated masses, specially shaped bowls for powder, animals etc.

MODEL	CAPACITY kg	READABILITY g	LINEARITY g	REPEATABILITY g	RESPONSE TIME	PAN DIM. mm
PTF 25 D CPZ 25 D	25	0,5	± 1	± 0,5	3 ÷ 4 sec.	400x500
PTF 35 ARD CPZ 35 ARD	6,5 / 35	0,1 / 1 autorange	± 0,2 / 2	± 0,1 / 1	3 ÷ 4 sec	400x400
PTF 50 ARD CPZ 50 ARD	5 / 50	0,1 / 1 autorange	± 0,2 / 2	± 0,1 / 1	3 ÷ 4 sec	400x500
PTF 50 D CPZ 50 D	50	1	± 2	± 1	3 ÷ 4 sec	400x500
PTF 26 D CE* CPZ 26 D CE*	26	0,5	± 1	± 0,5	3 ÷ 4 sec	400x500
PTF 52 D CE* CPZ 52 D CE*	52	0,1 crossed	± 0,2	± 0,1	3 ÷ 4 sec	310x310 (base 400x500)

* CE metrologic version, according to EEC Directive 2009/23

High precision platform and piece-counting with reading unit

PTF - CPZ series

Functions:

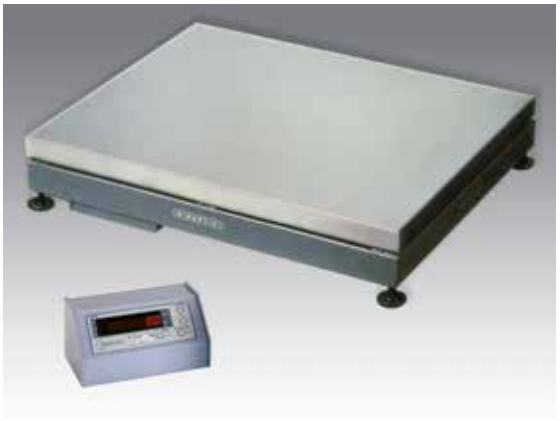
Automatic calibration of full-scale by external mass (optional)

Programmable functioning parameters locally and by means of RS232: speed of reading, type of stabilisation, etc

Easily adaptable to environment thanks to a digital filter selectable by the user

Bar-graph indicator for remaining capacity even after zero taring over the whole range

Sampling: with 10 pieces and multiples up to 100 pieces



Technical specifications :

Solvent proof and easy to use membrane keyboard with ON/OFF, MODE and TARE keys. CPZ-P models also with GRAMS/PIECES commutation key

7 segments display

Structure and base manufactured with oven painted structural steel

Zinc plated platform and mechanical parts

Levelling feet

Magnetic load cell of our production, set on a levers system, protected from dust and splash proof

Data output: RS232 I/O interface

Operating temp.:10°÷ 40°C (optimum 15°÷ 30°C)

External power supply: 230 VAC (-15% / +10%) optional 110 VAC

Power consumption: 14 VA

On request:

Accessory for the calibration with internal mass for models 600 – 1500 – 3000

Device to store in memory the last data in case of power failure

Printer

Reading subdivision (with a computer, via RS232, it allows the reading with one more decade)

Special models with a greater number of divisions and possibility to connect peripheral units

Stainless steel execution

MODEL	CAPACITY kg	READABILITY g	LINEARITY g	REPEATABILITY g	RESPONSE TIME	PAN DIM. mm
PTF 100 DP CPZ 100 P	100	1	± 2	± 1	3 ÷ 4 sec.	600x700 [1]
PTF 150 DP CPZ 150 P	150	1	± 2	± 2	3 ÷ 4 sec.	600x700 [1]
PTF 150DPA CPZ 150 PA	150	1	± 2	± 2	3 ÷ 4 sec.	700x900 [1]
PTF 200 DP CPZ 200 P	200	5	± 10	± 5	3 ÷ 4 sec.	600x700 [1]
PTF 300 DP CPZ 300 P	300	10	± 20	± 5	3 ÷ 4 sec.	700x900 [1]
PTF 600 DP CPZ 600 P	600	20	± 40	± 10	3 ÷ 4 sec.	1250x1250 [2]
PTF 600 DPA CPZ 600 PA	600	20	± 40	± 10	3 ÷ 4 sec.	700x900 [1]
PTF 1500 DP CPZ 1500 P	1500	50	± 100	± 20	3 ÷ 4 sec.	1250x1250 [2]
PTF 1500 DPA CPZ 1500 PA	1500	50	± 100	± 20	3 ÷ 4 sec.	1250x1250 [2]
PTF 3000 DPA CPZ 3000 P	3000	100	± 200	± 50	3 ÷ 4 sec.	1250x1250 [2]

1 = Stainless steel 2 = Galvanized

Platforms with column-mounted reading unit

PTF-B200 series

Functions:

Weight readout

Percentage weight

Stainless steel weighing platform

Painted steel frame and structure

ABS terminal structure

Reading unit with 52 mm backlit LCD display and 7 command key

230V electrical power adapter included

Piece- counting function

Buit in rechargeable battery provides power

for 90 hours

On request:
IP65 inox indicator
Serial port RS232

MODELS	CAPACITY kg	DIVISION g	INOX PAN mm	DIM. mm (W x D x H)	WEIGHT kg
PTF B200/30S	30	2	350x450	350x450x850	16,5
PTF B200/60M	60	5	420x520	420x520x850	18,5
PTF B200/150M	150	10	420x520	420x520x900	18,5
PTF B200/150L	150	10	600x800	600x800x900	65,5
PTF B200/300L	300	20	600x800	600x800x900	65,5

Load cell technical balances - ATEX

EU-C "ATEX" series

CE Ex II 3G EEx nAL IIC T4

These instruments are dedicated to the usage in environments with risk of explosion, classified as **ZONE 2**. They are built with **method of protection nAL** for **gas group IIC and temperature class T4** (135°C) according to regulation EEC 94/9.

Functions:

LCD display with small-size decimal digits, for easier and more immediate reading

Waterproof and acid resistant membrane keyboard. Easy to use with the ON/OFF, TARE, MODE and PRINT keys (RANGE/PRINT for DR model)

Indication of the reached stable weight

Bar-graph indicator of dosage and remaining capacity of the balance

Parameters configurable by menu: reading in g (grams), lb (pound), oz (ounce), ct (carats), pcs (pieces), % (percentage)

Technical specifications:

Automatic end of range calibration (with external mass supplied on request)

Memory of the current weight in case of power failure

Enhanced anti-shock system

Metallic body with epoxide protection

Load cell nearly unbreakable and without

transportation problems

Data output: I/O RS232 adjustable

Operating temperature: 10°C÷ 40° C

International power supply unit: 100 ÷ 240 VAC

Dimensions (W x D x H): 215x355x120 mm
(Mod. EU-C15000: 260x255x120 mm)

Weight:4,5 kg ~ (Mod. EU-C 15000: 6 kg ~)

On request:

1, 2 and 5 kg masses in class F1 for calibration

Special executions

MODEL	Capacity g	Readability g	Linearity g	Repeatability g	Response time	Pan mm
EU-C 2002X	≥ 2000	0,01	± 0,02	± 0,02	2,5 s	150x150
EU-C 4002X	4200	0,01	± 0,02	± 0,02	2,5 s	150x150
EU-C 7500PQX	7500	0,1	± 0,3	± 0,3	2 s	190x190
EU-C 7500PTX	7500	0,1	± 0,3	± 0,3	2 s	Ø 190
EU-C 7500DRX	950 7500	0,01 0,1	± 0,05 ± 0,1	± 0,05 ± 0,1	2 s	Ø 190
EU-C 10000PTX	10200	0,1	± 0,3	± 0,3	2 s	Ø 190
EU-C 15000X	15000	0,5	± 0,5	± 0,5	2 s	260x260

Inox vessels and accessories

MDC series

Standard capacity measures for testing measuring systems for liquids other than water

Model Product code	Capacity litres
MDC 1	1
MDC 2	2
MDC 5	5
MDC 10	10
MDC 20 MID	20
MDC 50 TL	50
MDC 100 TL	100
MDC200	200
MDC 1000	1000

Other capacities on request

Technical specifications:

Robust and antishock main body in AISI 304 stainless steel

Graduated scales suitable to indicate the permitted limits of error

On request:
Certificate by referenced laboratory
Shockproof wooden case for transport
Stainless steel cart with pivoting wheels

calibration service in italy

Calibration service

LAT Center **n. 94**

Since 1997 Gibertini has an ACCREDIA LAT center for electronic balances calibration.
From april 2002 this accreditation has been extended to pipettes calibration and from july 2004 also to hydroalcoholic solutions.

The law 273/91 has created the National Service for Calibration (S.N.T.) in Italy thus confirming the primary metrological Institutes the tasks of:
- preserving the national standards
- disseminating the units of measure of the International Systems of Unit Measure (SI), thus assuring the indispensable metrological reference for industrial and commercial activities.
The dissemination may occur directly by the Institutes or through the accreditated centers in Italy. ACCREDIA LAT centers are therefore laboratories equipped with reference standards (referred to national standards) responsible of performing calibrations, issuing at the end the relative certificate. ACCREDIA LAT centers activity is recognized by EA (European co-operation for Accreditation) because ACCREDIA is signatory of multilateral agreement for the mutual recognition of certificates.

The ACCREDIA LAT center n. 094 of Gibertini Elettronica issues calibration certificates for electronic balances up to 30 kg, microdosimeters (pipettes and syringes) from 0,001 ml to 10 ml and hydroalcoholic solutions from 5 % vol to 60 % vol.

ACCREDIA LAT Center n. 094 is accredited for balances, microdosimeters and hydroalcoholic solutions calibration. For details consult the accreditation table on **www.accredia.it**

Masses and set of weights Certificate to OIML norms
Calibrated masses and set of weights with EA legal certificate

The International Organization of Legal Metrology (OIML) is a world–wide inter–government organization in which the primary aim is the harmonization of the rules and of the metrological controls applied by national metrological bodies, or from similar organizations of its member States.

Conventional mass

The conventional value of the result of the weighing in the air, in conformity with international prescription OIML R 111.

"The conventional value of the result of the weighing in air of a body is equal to the mass of a sample, with a density 8000kg/m3 at 20°C, that equalizes the body to room temperature of 20°C in air with density of 1,2kg/m3 ".

Classes of minimal precision of the masses used with weighing instruments

The classes of precision of the masses used with weighing instruments must be chosen in conformity with the R 76 of the OIML "Instruments of weighing with non automatic functions".

Class E1-E2-F1: masses suitable to being used with weghing instruments of class I (our precision balances).

Construction

The masses of the classes E1 and E2 must be solid and without cavities opened towards the atmosphere. Their construction must be integral, that is they must be constituted from a single piece of material.

Mass nominal value	Max Error allowed ± mg						
	Class E_1	Class E_2	Class F_1	Class F_2	Class M_1	Class M_2	Class M_3
50 kg	25	75	250	750	2500	7500	25000
20 kg	10	30	100	300	1000	3000	10000
10 kg	5	15	50	150	500	1500	5000
5 kg	2.5	7.5	25	75	250	750	2500
2 kg	1.0	3.0	10	30	100	300	1000
1 kg	0.5	1.5	5	15	50	150	500
500 g	0.25	0.75	2.5	7.5	25	75	250
200 g	0.10	0.30	1.0	3.0	10	30	100
100 g	0.05	0.15	0.5	1.5	5	15	50
50 g	0.030	0.10	0.30	1.0	3.0	10	30
20 g	0.025	0.080	0.25	0.8	2.5	8	25
10 g	0.020	0.060	0.20	0.6	2	6	20
5 g	0.015	0.050	0.15	0.5	1.5	5	15
2 g	0.012	0.040	0.12	0.4	1.2	4	12
1 g	0.010	0.030	0.10	0.3	1.0	3	10
500 mg	0.008	0.025	0.08	0.25	0.8	2.5	-
200 mg	0.006	0.020	0.06	0.20	0.6	2.0	-
100 mg	0.005	0.015	0.05	0.15	0.5	1.5	-
50 mg	0.004	0.012	0.04	0.12	0.4	-	-
20 mg	0.003	0.010	0.03	0.10	0.3	-	-
10 mg	0.002	0.008	0.025	0.08	0.25	-	-
5 mg	0.002	0.006	0.020	0.06	0.20	-	-
2 mg	0.002	0.006	0.020	0.06	0.20	-	-
1 mg	0.002	0.006	0.020	0.06	0.20	-	-

1

2

3

4

Certificato di taratura N.o Z01 4381
Certificat d'étalonnage N.o

RISULTATI DI TARATURA
RÉSULTATS D'ÉTALONNAGE

Massa nominale Masse nominale	Marcatura Marquage	Massa convenzionale Masse conventionnelle	Incertezza in ± Incertitude in ±	Operatore(i) Opérateur(s)
1 kg	ZK 47	0,999 999 6 kg	1,5 mg	WURMSER B.

CALIBRATURA DAL 28/06/01
Étalonnage du

Indicazione diversa
Renseignements complémentaires

FAC SIMILE

5

1. Set of weights from 10 mg to 5 kg in class M1 **2**. Set of weights from 1mg to 100g in class E2 **3**. Masses from 500g in class F1 **4**. Masses from 200g e 1kg in class F1 **5**. Certificate example.

Subject to technical changes without notice.
Instruments intended to exclusive scientific purpose and/or for internal controls. They must not be used in environments with danger of explosions.
The use is forbidden in the cases provided by art. 1, point 2, letter a) of Directive 2009/23 EC except for those models approved with CE mark (legal metrology).
Electronic balances are sensible to the variation of the acceleration of gravity. They must be calibrated on the working site (Directive 2009/23 EC).
All our instruments comply with Directive 2004/108 EC (electromagnetic compatibility).

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GIBERTINI

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ISO 9001:2008

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ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
LAT 094