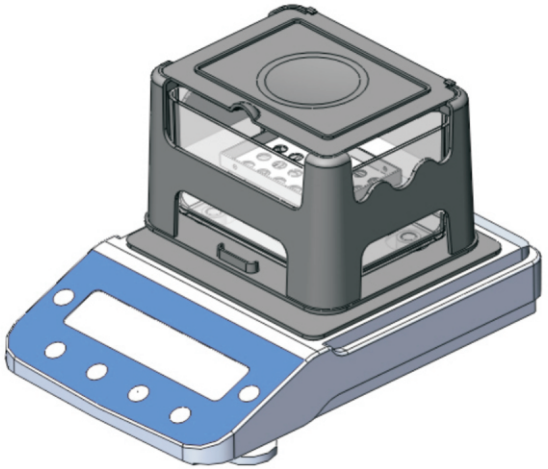
ATO

Benchtop Solid Density Meter

Operation Manual



Please read the instructions carefully before using the instrument.
Please properly keep the instructions for ready reference

ATO

Thank you for choosing ATO benchtop solid density meter
In order for you to correct installation and use of our products, we recommend you read this manual in detail, and proper preservation for days after the reference.

Catalog

Eight, troubleshooting

1, weight instability:Exclusion method: take the measurement platform and sink to see if there is no foreign body or water drops below the support table. If there is a foreign body or a drop of water, please remove the foreign body or wipe the water clean.

2, if the screen display, or -ERROR-
Method: according to the [-0-] , try to see whether it will be stable to zero, if not to zero, first clear the table on the object, and then contact the relevant personnel to repair the supplier.

3, if there is no fault can not be ruled out, do not open the machine, must contact the relevant personnel to repair.

4, if the measured density value is always a value, or when the density of the total display [-0-] , the temperature compensation is set to 25, the solution compensation is set to 1

5. The following information shows some common faults:
A - shows that the electronic balance cannot get a stable reading.
B if 8.8.8.8.8.8 cannot convert 0.000g. This represents zero drift. Press the [-0-] key to display the 0.000g, if not, please re calibration. (refer to calibration)

3, to know whether the machine has been immersed in water or failure, please go to work every day, by the supervisor to check whether the screen can display 0.000g, if it is to show that the 88888 machine that TIGI failure

4, in case of water into the body how to do?
First, the power source will be removed, and then inverted, dry machine. And immediately notify the supplier of professional maintenance personnel for inspection, maintenance. Do not disassemble, so as not to damage the load cell.

Seven, maintenance

1, the energy must not exceed 300g of the weight of the object; and in the installation, use, should avoid the machine to withstand the pressure of excess power.

2, the machine outside the table must be dry cloth wipe, do not make the accumulation of dust.

3, if the machine is not used for a long time, the water tank should be removed.

4, the machine should avoid collision, extrusion and moisture, such as a long time not to use, please take off the power supply, and dust cover properly.

Eight, troubleshooting

1, weight instability:

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Introduction and instrument description

Principle:

Electronic densimeter is based on ASTM D297-93, D792-00, D618, D891 Archimedes's principle of water displacement. Based on the two variables of materials and productsThe value of the density of the relevant. With the temperature and density at 4 C for 1 g/ based.

Use:

This machine is mainly used in rubber, plastics, wire and cable, food, composite materials, cosmetics,Shoe material, glass, precious metal recycling... Other industries. Direct reading of solids and particles,The average weight of the sample, the floating body and the powder sample in the air, the average weight in water andApparent density, volume, percentage.

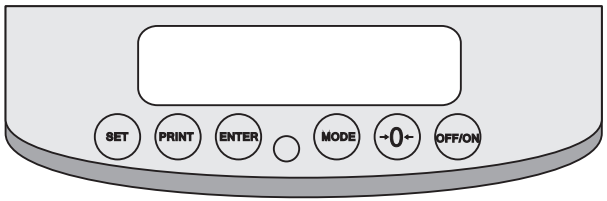
measuring range	0.01 ~ 300g/ 0.005–300g/ 0.005–600g
Density analysis	0.001g/cm ^{3}

1、Component part

①Measuring table ②Calibration weight ③Host ④Water tank

⑤Anti floating frame ⑥Power supply ⑦Tweezers ⑧Tennis

⑨Glassware



The control panel

1. →0← :weighing numerical reset/enter calibration;

2. On/Off: control instrument power On/Off;

3. MODE: switch test results; Enter the engineering debug mode;

4. ENTER: capture and store the current sample value; return

5. SET :enter setup mode; Switch or modify Settings;

6. PRINT:A PRINT data; Enter setup submenu; Set the parameter shift;

Two, installation instructions

1, the installation of the density tester must avoid vibration, direct sunlight, electrical machinery, electromagnetic waves, moist overheating position and voltage stability.

2, adjust the 2 pin to determine the host to reach the level of position, and determine the sensor platform and water container support without contact.

3, add distilled water to reach the water tank water level line position, and then placed in the water tank support seat

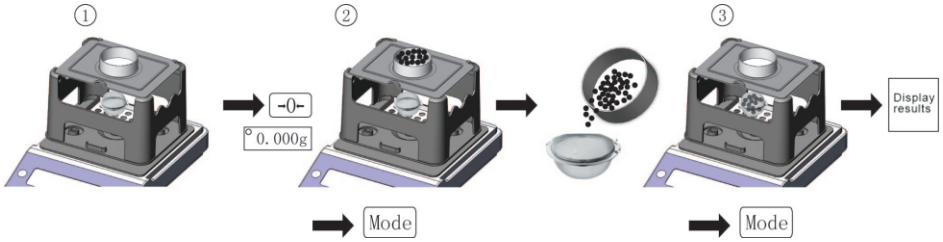
2, confirm the display is 0.000g. Then put the particles in the glass dish, and then according to the ENTER balance on the right side of the LIq shows that the weight of the product has been recorded in the air.

3, with stainless steel tennis, and careful particles from stainless steel cup to tennis, and tightly cleaning in ethanol.

4, careful stainless steel tennis into the tank and remove bubbles in the burette stainless steel tennis then glass dish back measurement table.

5, at this time, the value of the display for the weight of particles in the water, according to the ENTER memory of the weight of the water and get the density value.

6, press the MODE key, will be displayed in turn, density value (DEN), the volume value (VOL). Press the PRINT key to print the measurement data automatically, press the SET key to exit back to the weighing mode. Other products can be measured.



Six, operation notes

1, The instrument is a special instrument for detecting the apparent density. Please specify the person responsible for the management and operation.

2, with the apparent density tester, accidentally caused by water or other liquid spill in the container, we must promptly clean up, so as not to delay the repair time.

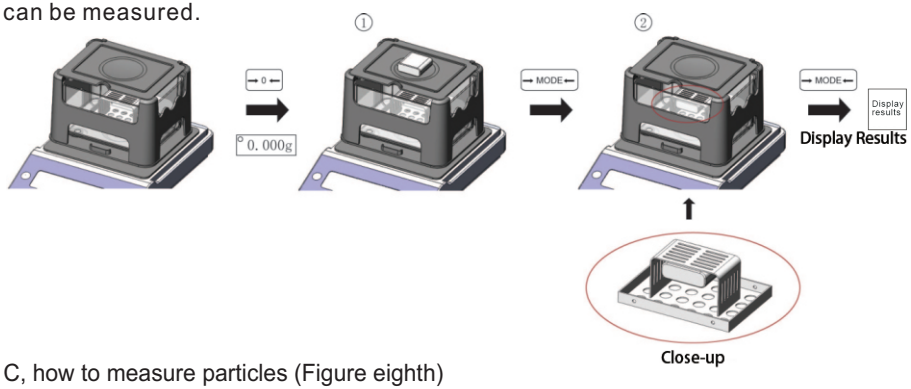
B: floating body measurement

1, put anti floating on the water column (see Figure 1), according to [0] to zero.

2, the product will be placed on the measuring table, the machine is stable according to the ENTER key, the right side of the balance shows LIq on behalf of the weight of the product has been recorded in the air.

3, take tweezers to put the product on the anti floating shelf (product can not touch the wall). When the machine is stable according to the ENTER key, the machine displays the density value directly.

4, press the MODE key, will be displayed in turn, density value (DEN), the volume value (VOL). Press the PRINT key to print the measurement data automatically, press the SET key to exit back to the weighing mode. Other products can be measured.



C, how to measure particles (Figure eighth)

Dead work：

1, prepare a cup of industrial alcohol, used to clean particles, remove bubbles

2, prepare 1, 1 cups of tea ball (instrument with).

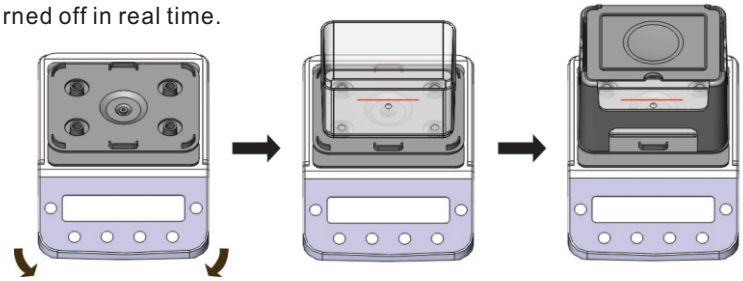
Measurement procedure:

1, put the 1 glass on the table, in addition to the stainless steel ball in the water column, according to [0] weight deduction

4, put on the platform and sensor measurement to determine the measuring platform at the bottom of the hanging bar and put the correct measurement on the sensor platform on the sink in the water. When there is a bubble attached to the measurement of the hanging bar, you can use tweezers to remove the bubble (you can add some detergent, you can reduce the production of hanging column bubble)

Warm machine:

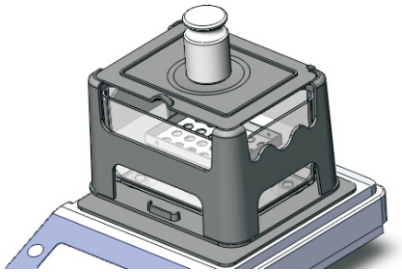
This instrument is a visual density device, when the plug and turn on the power supply to make it to achieve a stable state, the temperature of about 30 minutes. Once this process is completed, the power supply will be stable when the power is turned off in real time.



Three, correction instructions

High precision electronic balance device in electronic densimeter, the sample density is to calculate the weight of the basis, the measuring result is accurate from the accurate quantity weight measurement, so it needs to be corrected using the correction weights. Need to use correction weights to correct the situation:

- for the first time
- moved elsewhere
- When the environment changes.
- regular adjustment



Please explain:

If you have moved to other places, you must re adjust the settings

Correction method (using 100g weight correction):
Plug in the power supply and warm up for 30 minutes
1, the tester in the weight of the mode state, long press the [-0-] key. When the screen shows CAL to let go, then enter the calibration procedure.

2, 300g flashing on the screen, please put the weight of the 100g on the measuring platform, the tester automatically detect and correct.

3, when the screen is displayed when the correction is completed 100. Then pick up the weights and go back to the test mode.

Four, function settings
1, how to water temperature compensation (default is 25 degrees)
Weighing the state "Air", press "SET" key, the display 0, press the ENTER button two times (this time for the current setting value of solution temperature, press the SET button to modify the settings, press the PRINT key to set the parameters of the shift, press the ENTER key to enter the next set, press the [-0-] key to exit the setting mode

2, solution compensation (media parameter settings (default is 1)
In weighing the state "Air", press "SET" key, the display 0, press the ENTER button three times (this time for the solution of compensation current setting value, press the SET button to modify the settings, press the PRINT key to set the parameters of the shift, press the ENTER key to enter the next set, press the [-0-] key to exit the setting mode

3, print settings (default setting baud rate 9600)
Shutdown state, hold down the "SET" button, press the "switch" button to start, this time to display "-SySt-", press the two "SET" button, display "Prit", press

"PRINT" to enter the print menu, select the print menu to set. Press the SET key to switch settings or modify the settings parameters, press the PRINT key to enter the settings or set the parameters of the shift, press the ENTER key to exit the setting mode
Print menu function:
"P-bAud-" Baud rate;
"P-tiE" Print time;
"P-dAtA" Print date。

Five, measurement steps
The correct density measurement weight required: Based on the Archimedes principle to calculate the density, in order to avoid the error density increase, the required weight is heavy.
A: solid measurement
1, boot
2, the display will change from 8888888 to 0.000g, if the display is not 0.000g. Press [-0-] to zero.
3, samples will be put on the table, after press ENTER -- said the store on the left shows, balance weight of the product has been recorded on behalf of LIq in the air.
4, put the sample into the water column, stable after pressing the ENTER key, appear - said the store, and then the machine directly display density value, volume value.
5, press the MODE key, will be displayed in turn, density value (DEN), the volume value (VOL). Press the PRINT key to print the data automatically, press SET to exit to return to the weighing mode. Other products can be measured.