

# TOUCH TYPE - TWS-153/300/600/1200PY POROUS PRODUCT SOLID DENSITY TESTER



## Suitable for:

Elastic materials, sponges, EVA materials, EPDM plastics, and other water-absorbing materials

## Principle:

According to **ASTM D 3574, GB / T1033, T533** standard and by adopting the buoyancy method of Archimedean principle. It can accurately measure the bulk density of shoe materials, sponges and EVA materials.

## Function:

It has four modes:

1. BULK — Adopting water saturation method for porous material. Show Bulk density, Wet density, Porosity, Absorption, Apparent DS, Open pores, Close porosity, Total porosity.
2. BK+ — Adopting water saturation method for porous absorbent material. With five groups of memory functions.
3. P — For powder products, use a pycnometer (optional) to directly read the true density.
4. DS — Nonabsorbent material. Show Density, Volume, Mix ratio directly.

## Style:



TWS-153PY



TWS-300/600PY



TWS-1200PY

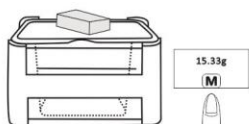
## Specification:

Mode	TWS-153PY	TWS-300PY	TWS-600PY	TWS-1200PY
Max weight	150g	300g	600g	1200g
Weighing Precision	0.001g	0.01g		
Density Precision	0.0001g/cm³	0.001g/cm³		
Setting	With temperature compensation, solution compensation functions and Medium solution of waterproofing process density setting.			
Temperature Function	With Infrared temperature sensors can automatically detect			

## Testing step:

### E.g. (Porous solid)

Step 1:  
Testing sample  
air weight

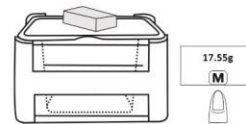


Step 2 :  
Doing the  
waterproofing process

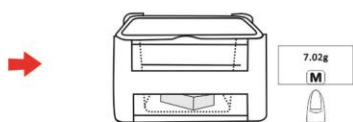
Method:  
1.vacuum saturated  
2. boiling saturated  
water



Step 3 :  
After waterproofing,  
testing air weight



Step 4 :  
After waterproofing,  
testing water weight



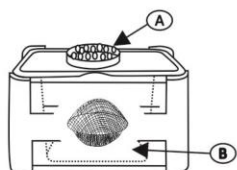
Step 5 :  
Get the result

Bulk			
Bulk	DS :	1.454	g/cm <sup>3</sup>
Wet	DS :	1.665	g/cm <sup>3</sup>
Porosity	:	21.06	%
Absorption	:	14.48	%

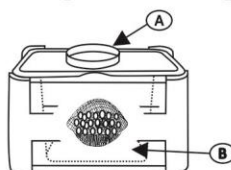
Bulk			
Apparent DS	:	1.843	g/cm <sup>3</sup>
Open pores	:	2.222	g/cm <sup>3</sup>
Close pores	:	37.37	%
Total porosity	:	58.43	%

### E.g. (Granular)

Step 1:  
Testing air weight



Step 2 :  
Testing water weight



Step 3 :  
Get the result

DS			
Density:	:	0.904	g/cm <sup>3</sup>
Volume:	:	4.623	cm <sup>3</sup>
Mix 1 :	:	95.48	%
Mix 2 :	:	4.52	%

### E.g. (Powder)

Step 1:  
Testing sample  
air weight



Step 2 :  
Testing sample and  
liquid weight



Step 3 :  
Testing sample into  
liquid weight



Step 4 :  
Get the result

P			
Density:	:	1.503	g/cm <sup>3</sup>

## Features:

1. With the latest touch screen, simple operation and immediately display all measurement data.
2. With the RS-232C / USB computer interface, it can be easily connected to a PC and printer.
3. Can purchase pycnometer to read the true density of powder directly.
4. Built-in five groups of memory functions can measure five groups of samples at the same time in absorbent product density measurement mode.
5. With the function of mixing ratio, measure the ratio of the main materials in the two mixed materials. For example: Use the setting of the mixing ratio to calculate the glass fiber content.
6. With upper and lower limit functions, you can determine whether the specific gravity of the test object is qualified or not. This machine is equipped with a buzzer device.
7. The large tank design is adopted to reduce the error caused by the buoyancy of the hanging rail.