

# TOUCH TYPE - TWS-300DE SOLID DENSITY TESTER



## Suitable for:

Laboratory of solder, brass, bronze, silver, nickel, zinc, plastic, rubber, wire and cable, glass, film, hard alloy, soft synthetic leather, leather, elastic material, oil seal, oil ring, new materials and other recycling industries.

## Principle:

Referring to the standards of **ASTM D297, D792, JIS K6530, ISO2781, 1183** and by applying the buoyancy of the object immersed in the liquid and hydrostatics principle, the density, volume, and mixture ratio of dense solid materials can be shown.

## Function:

It has four modes:

1. Density measuring mode DS - measuring density and volume.
2. **Hydrogen content measurement mode A/B - (density value/hydrogen content).**
3. Mix ratio density measuring mode Mix1- it can get the proportion of the main material.
4. Mix ratio density measuring mode Mix2- it can get the proportion of the second material.

## Specification:

Model	TWS-300DE
Max Weight	300g
Weighing Precision	0.01g
Density Precision	0.001g/cm <sup>3</sup>
Volume Precision	0.001cm <sup>3</sup>
Mixing Ratio 1	0.01%
Mixing Ratio 2	0.01%



## Features:

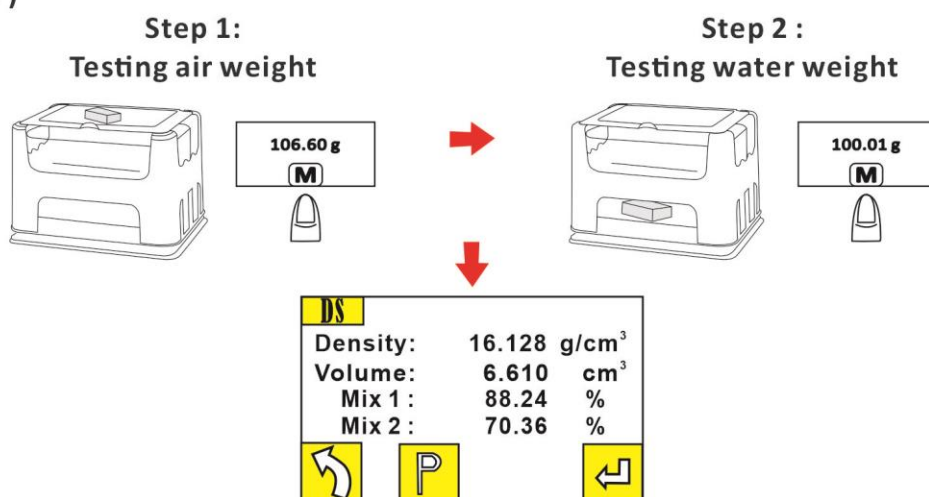
1. With the function of solution compensation.
2. It can measure the specific gravity of solid, granular, floating and aluminum sample.
3. With Infrared temperature sensors can automatically detect water temperature and automatically compensate for water temperature.
4. With RS-232C / USB computer interface, it can be easily connected to a PC and printer.
5. With mixing ratio function, 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, 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 can reduce the error caused by the buoyancy of the hanging rail. The size of the water tank is 148 × 100 × 85mm.

### Analysis Chart :


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1. Measure the size of the upper cover to 154 × 112mm
  2. The size of the water hanging basket: is 110 × 68mm
  3. Infrared temperature sensor
  4. Large tank design - The internal space size is 148 × 100 × 85mm
  5. Iron shall protect the IC board and load cell well.
  6. The 3.5 inch large-size touch screen.

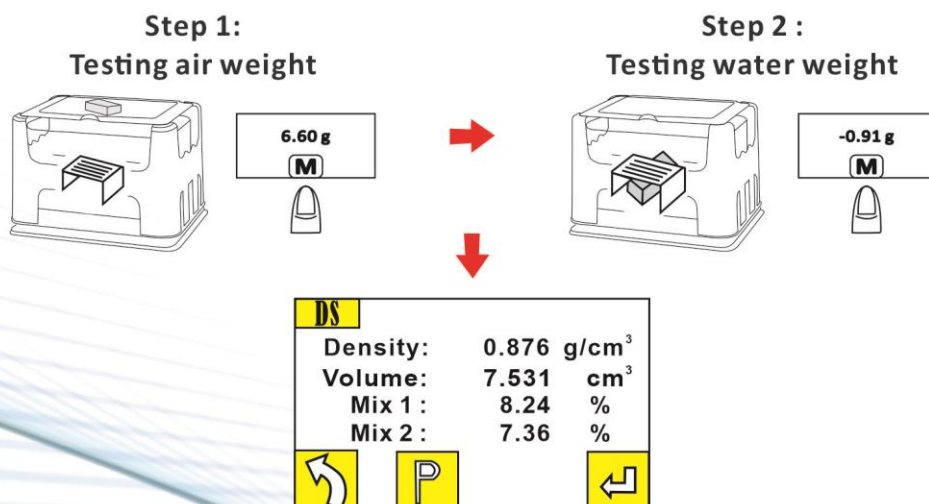
### Testing step:

#### ★ ( Solid )



#### ★ ( Floating )

Accessory:  (Accessories need to be deducted when measuring)

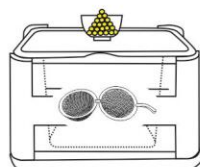


Testing step:

★ (Granular)

Accessory:  (Accessories need to be deducted when measuring)

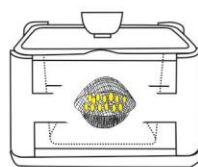
Step 1:  
Testing air weight



6.60 g  
M





Step 2 :  
Testing water weight



1.19 g  
M

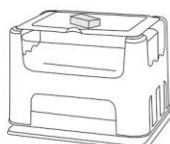


DS		
Density:	1.216	g/cm <sup>3</sup>
Volume:	5.426	cm <sup>3</sup>
Mix 1 :	12.12	%
Mix 2 :	5.13	%
	P	

★ Aluminum sample (Hydrogen content )

Sample A (normal pressure state) density measurement

Step 1:  
Testing air weight



20.60 g  
M





Step 2 :  
Testing water weight



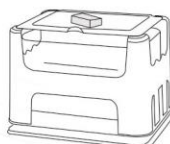
12.90 g  
M



A		
A :	2.667	g/cm <sup>3</sup>
	P	

Sample B (vacuum evacuation) density measurement

Step 1:  
Testing air weight



20.89 g  
M





Step 2 :  
Testing water weight



13.15 g  
M



B		
A :	2.667	g/cm <sup>3</sup>
B :	2.691	g/cm <sup>3</sup>
DI :	0.89	%
	P	

A : Sample ( A ) Density value , B : Sample ( B ) Density value, DI: Hydrogen content (%)