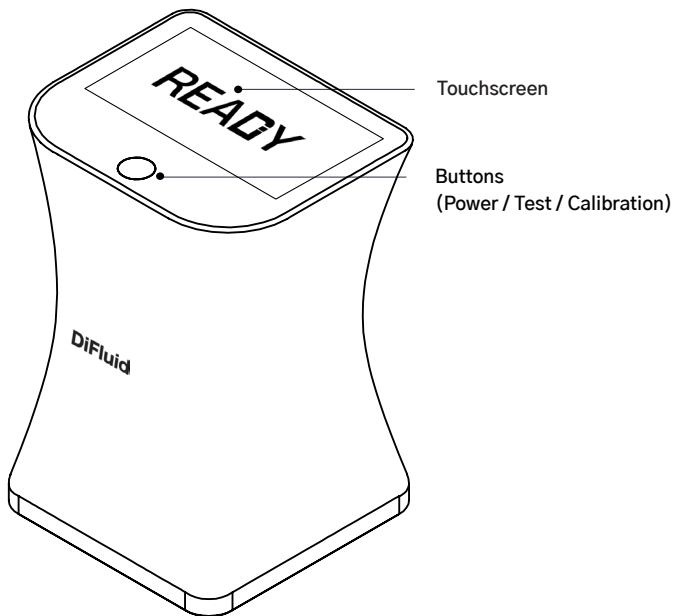


DiFluid Omni

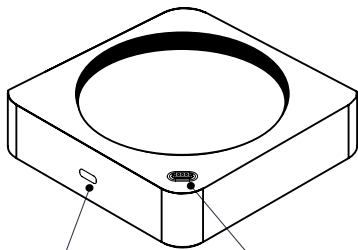
User Manual

1. Know Your Omni

Omni Main Unit



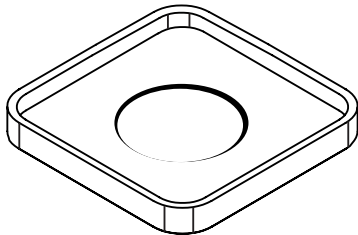
Particle Analysis Tray



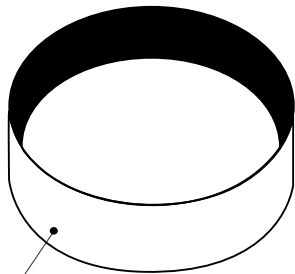
USB-C Charging Port

Magnetic Connector

Tray



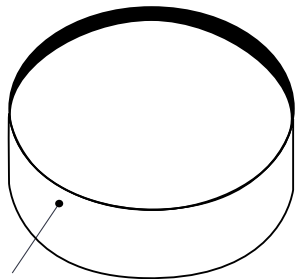
Roast Analysis Tray



Deeper side for
coffee beans



Reverse



Shallower side
for coffee ground

2. Product Parameters

Specs

Name	Professional Roast / Particle Analyzer (2-in-1)
Model	DFT-SD101
Dimensions (Main Unit)	109*79*72mm(L*W*H)
Weight (Main Unit)	290g
Screen	2.8-inch HD touchscreen
Battery	2500mAh rechargeable lithium battery
Light Source (Roast Analysis)	Multi-band NIR light source (850nm, 940nm)
Optical Sensor	Two-dimensional imaging sensor
Data Records	500 Roast Analysis Records / 500 Particle Analysis Records
Operating Temperature	0-45°C
Charging Port	USB-C
Charging Parameters	5V=1A

Accessories

Omni Main Unit *1

Particle Analysis Tray *1

Roast Analysis Tray *1

Tray *1

Calibration Plate *1

USB-C Charging Cable *1

Coffee Spoon *1

Brush*1

Scraper *1

Coffee Ground Spoon *1

Velvet Bag *1

Protective Film*1

Toolbox*1

Test Report *1

Manual (including warranty card)*1

3. Preparation Before Use

APP Download

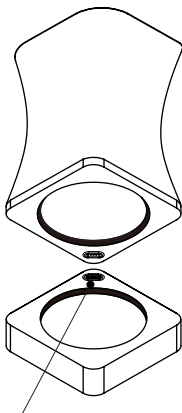
Scan the QR code below to download the DiFluid Café App.



Charging and Icons

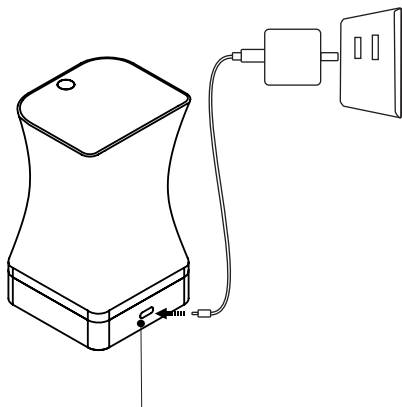
Charging: Please ensure that the battery is fully charged. Attach the Omni Main Unit to the Particle Analysis Tray and connect the included charging cable to the USB-C port of the side of the Particle Analysis Tray for charging.

1








Attach the Omni Main Unit to the Particle Analysis Tray.

2



Plug charging wire into the port of particle tray.

⚠ Note: If you turn on the device during charging, the device will first display the "DiFluid" page, and then enter the charging status page. You need to short press the button again to enter the "READY" page.

Icon					
Description	Fully charged	Charging	Bluetooth connected	WiFi connected	Bluetooth and WiFi connected

4. Basic Operation

Operate with Button

Power-off State

Press the button once to start the device. When the screen displays "READY", the device has finished booting up.

Power-on State

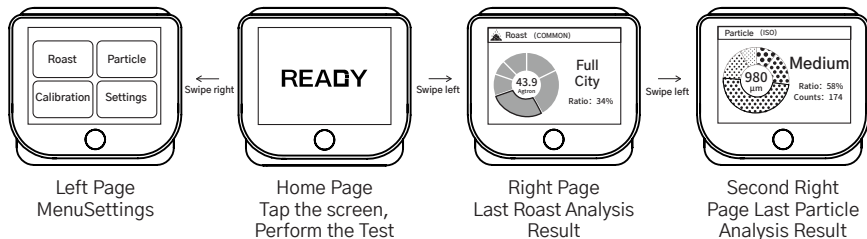
Short click: Perform the test.

A short click followed by a long press: Roast degree calibration.

Quick double-click: View device information.

Long press: Press and hold the button, and the screen will display "Power Off". Release the button to complete the shutdown operation.

Operate with Touchscreen



Swipe right to access the menu page

1. Roast : Perform roast analysis.
2. Particle: Perform particle analysis.
3. Calibration: Perform the calibration.
4. Settings: Access more settings for Omni.

Swipe left to access the analysis history page

1. View Roast Analysis History: Swipe left from the Home Page to view the last roast analysis result, and swipe down to access all roast analysis history.
2. View Particle Analysis History: Swipe left twice from the Home Page to view the last particle analysis result, and swipe down to access all particle analysis history.

On the Home Page, tap to perform the test.

On a sub-page, swipe right to return to the previous level page.

5. Function operation

Test

There are three methods to start the test

1. Click the button: In smart test mode, the system will automatically determine whether to perform roast analysis or particle analysis.
2. Tap the screen on the Home Page: In smart test mode, the system will automatically determine whether to perform roast analysis or particle analysis.
3. Click the <Roast> or <Particle> option on the menu page: The system will directly execute the corresponding analysis.

Roast analysis

1. Recommended Procedure

- 1) Use a roast analysis tray and a tray. Fill the beans into deeper side while the coffee ground into shallower side. Note that you need to use a Scraper to make it flush with the surface of the tray.
- 2) Click to power up, put the main unit over the roast analysis tray.
- 3) Swipe from left to right on READY page to enter the menu page. Click on the 'Roast' button to start test. The screen will display result after complete. (See page 11 for more details)

2. Analysis Result (See Page 12 For More Details)

3. Cautions

- 1) Light Source: Roast analysis utilizes near-infrared light sources (850nm, 940nm) for testing and analysis. White light is used for auxiliary functions such as smart tests and 0-6 silver skin detection
- 2) Silver Skin Detection: You can choose whether to enable the silver skin detection function for coffee beans or coffee grounds in the settings. You can also adjust the sensitivity of it.

Particle Analysis

1. Recommended Procedure

- 1) Use a coffee ground spoon to scoop an appropriate amount of ground coffee into the center area of the particle analysis tray.
- 2) Click to power up, put the main unit over the particle analysis tray. Make sure the magnetic ports are connected.
- 3) Swipe from left to right on READY page to enter the menu page. Click on the 'Particle' button to start test. The screen will display result After the completion of the test. (See page 13 for more details)

2. Analysis Result (See Page 14 For More Details)

3. Test

- 1) If the amount of coffee ground taken is more than one flat spoon, the analysis of finer particles may be affected.
- 2) After the Smart Diffuser function is turned on, it can automatically conduct diffusion according to the current particle distribution. If the particles have already been evenly distributed, the diffusion will not be carried out again.
- 3) During testing, the particle analysis tray will beep when diffusing the particle, which is a normal phenomenon.

4. Sampling Recommendations

- 1) For coarse grind, please take two-thirds of a spoonful of fine powder.
- 2) For fine grind, please control it to one-third of a spoonful of fine powder.
- 3) If the grind cannot be determined, please take half a spoonful of fine powder.
- 4) You can adjust the sampling amount according to the actual situation to achieve better dispersion and uniformity.

Calibration

Recommended Procedure

- 1) Take off the protective cover.
- 2) Click to power up, put the main unit over the calibration plate.
- 3) Swipe from left to right on READY page to enter the menu page. Click on the 'Calibration' button or start calibration by short click and then long click the button. The screen will display 'Success' after completion. (See page 15 for more details)

Test

Each Omni has its unique calibration plate. If you lost the original calibration plate, you could contact our online store to purchase a new one.

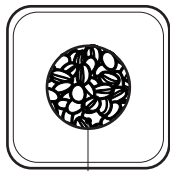
Settings

On the menu screen, click the <Settings> option to enter the settings page.

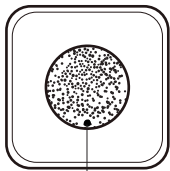
1. Roast: The settings related to roast analysis.
2. Particle: The settings related to particle analysis.
3. General: Device settings like language and screen brightness.
4. Device Info: See more Omni product information.
5. Factory Reset: Long-press on the reset icon and wait for the progress bar to complete filling (5 seconds). This will restore the device to its factory settings (Please note: This operation will clear all the history records, reset all settings and reboot the device).

Roast Analysis Operation Diagram

1



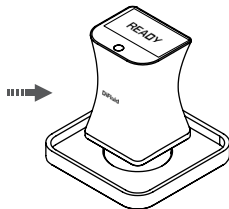
coffee beans



coffee ground

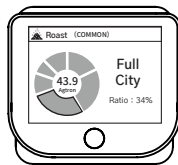
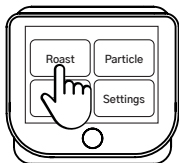
Use a roast analysis tray and a tray. Fill the beans into deeper side while the coffee ground into shallower side. Note that you need to use a scraper to make it flush with the surface of the tray.

2



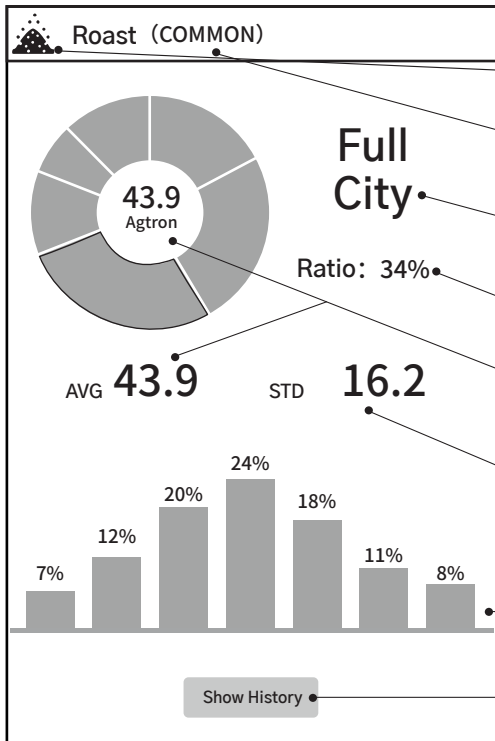
Click to power up, put the main unit over the roast analysis tray.

3



Swipe from left to right on READY page to enter the menu page. Click on the 'Roast' button to start test. The screen will display result after complete.

Roast Analysis Result Page



Sample Type

The current sample being tested is coffee beans or coffee grounds.

Roast Analysis Standard

The roast degree standard is used for the current result.

Roast Degree

The roast degree of the currently highlighted part of the pie chart.

Ratio

The ratio of the highlighted part of the pie chart.

Average Value

The average value of the roast degree, which reflects the overall roast degree.

Standard Deviation

The standard deviation of the roast degree reflects the roast uniformity. The smaller the value, the more uniform it is.

Distribution Details

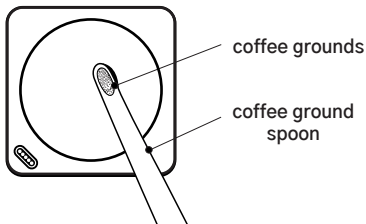
Detailed histogram of the distribution of the sample roast degree centered on the average value.

Show History

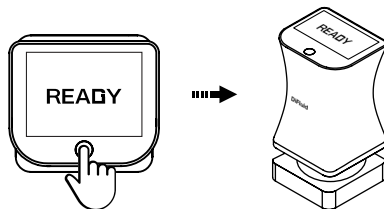
View all the history of roast analysis results.

Particle Analysis Operation Diagram

1



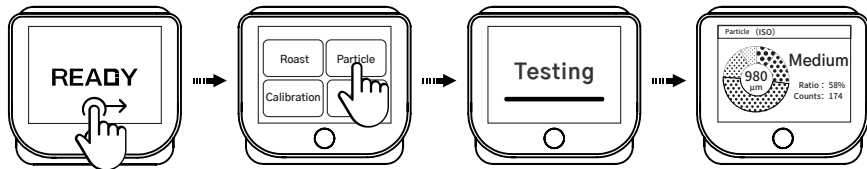
2



Use a coffee ground spoon to scoop an appropriate amount of ground coffee into the center area of the particle analysis tray.

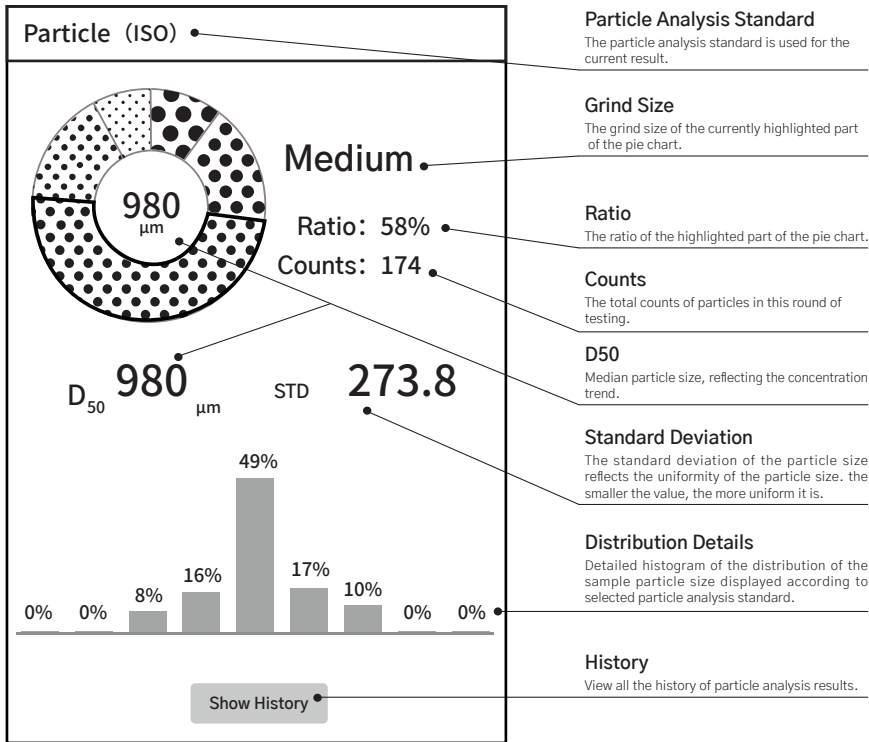
Click to power up, put the main unit over the particle analysis tray. Make sure the magnetic ports are connected.

3



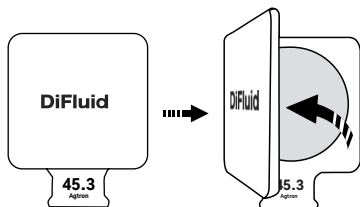
Swipe from left to right on READY page to enter the menu page. Click on the 'Particle' button to start test. The screen will display result after complete.

Particle Analysis Result Page



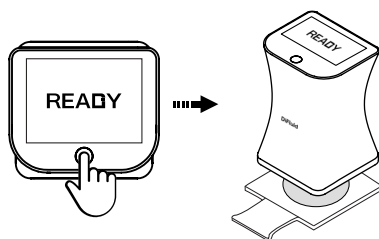
Calibration Operation Diagram

1



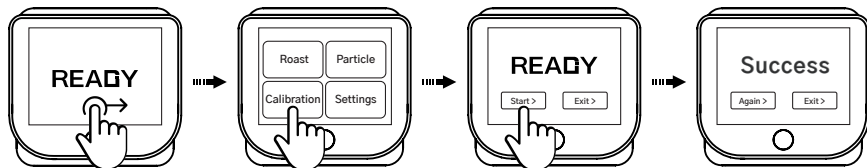
Take off the protective cover.

2



Click to power up, put the main unit over the calibration plate.

3



Swipe from left to right on READY page to enter the menu page. Click on the 'Calibration' button or start calibration by short click and then long click the button. The screen will display 'Calibration Success' after complete.

7. Standards Specifications

Summary of Roast Analysis Standards

AGTRON Values	COMMON	SCA
$0 \leq \text{AGTRON} \leq 30$	Espresso Roast	Very Dark
$30 < \text{AGTRON} \leq 40$	French Roast	Dark
$40 < \text{AGTRON} \leq 50$	Full City Roast	Medium-Dark
$50 < \text{AGTRON} \leq 60$	City Roast	Medium
$60 < \text{AGTRON} \leq 70$	Dark Roast	Medium-Light
$70 < \text{AGTRON} \leq 80$	Medium Roast	Light
$80 < \text{AGTRON} \leq 90$	Cinnamon Roast	Very Light
$90 < \text{AGTRON} \leq 150$	Light Roast	Extra Light

Summary of Particle Analysis Standards

International Standard ISO Sieve pore size (μm)	American Society for Testing and Materials Sieve Specifications	American Sieve Society Sieve specification
300	50	48
425	40	35
600	30	28
850	20	20
1180	16	14
1400	14	12
1700	12	10
2360	8	8

Grind Size Standard

Particle Size (μm)	Grind Size
$100 \leq \text{Particle Size} < 500$	Fine
$500 \leq \text{Particle Size} < 800$	Medium Fine
$800 \leq \text{Particle Siz} < 1100$	Medium
$1100 \leq \text{Particle Siz} < 1400$	Medium Coarse
$1400 \leq \text{Particle Size} \leq 2500$	Coarse