

DiFluid Omni

Professional Roast/Particle Analyzer

NIR Imaging

Multi-band Fusion

Auto Diffusor

HD Touchscreen

No Preheating

App & SDK



Coffee Data at First Glance

Professional Roast/Particle Analyzer

Advanced roast and particle size analysis with 2D imaging technology for improved coffee quality.

Not Only Degree of Roast

Omni calculates the roast degree distribution of beans in a few seconds. From the lightest to the darkest roast, Omni handles all types at ease.

But Also Particle Analysis

No need of manual labor, the particle tray connects to Omni magnetically, and vibrates the powder for accurate measuring.



Roast Tray

Particle Tray

Grab the Omni

Design Bringing User Experience.

Holding the waist of Omni in hand is more than ease.

The magnetic particle tray does not retain coffee powder, so you can enjoy a convenient and clean process of measuring. This is the digital coffee lifestyle for you to chill.



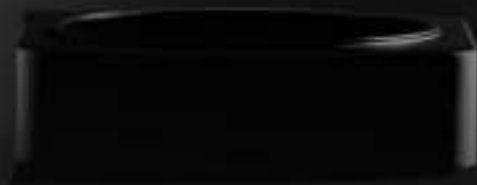
Touchscreen

2.8" touchscreen brings about smooth and intuitive experience, unlocking various interactions.



Magnetic

The magnetic tray will hook the omni tightly to supply power and vibrates the coffee grounds.



DiFluid Omni Roast Degree

How does roast degree affect coffee flavor?

Degree of Roast

Coffee roast degree is the color intensity of the beans and grounds, which indicates the coffee flavor and taste.

Omni utilizes 2D NIR technology to accurately capture the roast degree of every bean, offering distribution result to control the roast process.

SCA Roast Standard

The roast standard defined by SCA to estimate the degree of roast color, which helps baristas judge the flavor, divided by 10 grades.

Omni Roast Degree Range



150 Light Roast → Espresso Roast 0

Omni's roast degree range from 150 to 0 Agtron, supporting every kind of roast.

Roast Degree Distribution

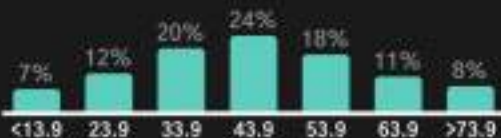


Full City

Ratio: 34%

AVG 43.9

VAR 16.2



Roast Degree Standards

Agtron	COMMON	SCA
0-30	Espresso Roast	Very Dark
31-40	French Roast	Dark
41-50	Full City Roast	Medium-Dark
51-60	City Roast	Medium
61-70	Dark Roast	Medium-Light
71-80	Medium Roast	Light
81-90	Cinnamon Roast	Very Light
90-150	Light Roast	Extra Light

0.1 **±0.1** **0-150**

Resolution

Accuracy

Range

Highlights

Technology in Measuring Roast



Tested Bean Sample



DiFluid Omni 2D NIR Imaging



Single Point Detection Solution is Inaccurate

2D Spectrum Imaging

By 2D Near Infra-red imaging (NIR) technology, DiFluid Omni can capture the roast feature of each bean, thus presenting statistical data. This method helps the barista know their coffee.

Multi-band Data Fusion

DiFluid Omni applies multi infra-red band like 850nm and 940nm. By fusing the images, the measurement is more accurate and reliable for baristas to adjust accordingly.



Photo



850nm IR



940nm IR



Coffee Bean Silverskin Detection



Coffee Grounds Silverskin Detection



Silverskin Detection

DiFluid Omni can skillfully recognize the silverskin from both coffee beans and grounds. Users may adjust the sensitivity in demand.

Temperature Compensation

With temperature compensation system, DiFluid Omni starts working instantly after boot-up, and preheating is not needed anymore -- faster than most roast analyzers.

As fast as

4 seconds

second test speed

No

Preheat

when booting up

DiFluid Omni Particle Size

How to adjust coffee by particle analysis?

Omni Particle Analysis

DiFluid Omni can analyze particle size distribution through auto diffusor and uniformity test. The grinding result can be controlled better to optimize coffee flavor and quality.



Boost Aroma



Brew Control

ISO Particle Standard

Particle size has a significant impact on coffee extraction, taste and the operating parameters of the coffee machine. Coffee beans are classed as 10 sizes to help baristas evaluate and adjust their grinders to reach a certain **size distribution and quality**, which are critical to **ensuring the quality and flavor of the coffee**.

Omni Particle Size Range

Omni's measuring range of particle size is from 100 to 2500 μ m, exceeding the range of coffee grounds.



Particle Analysis Distribution



Medium

Ratio: 58%
Counts: 174

D_{50} 980 μ m VAR 273.8



Particle Standard Reference

ISO Screen Aperture (μ m)	ASTM Aperture Stizes	TYLER Series Mesh Size
300	50	48
425	40	35
600	30	28
850	20	20
1180	16	14
1400	14	12
1700	12	10
2360	8	8

1 μ m

Particle Size Resolution

100–2500 μ m

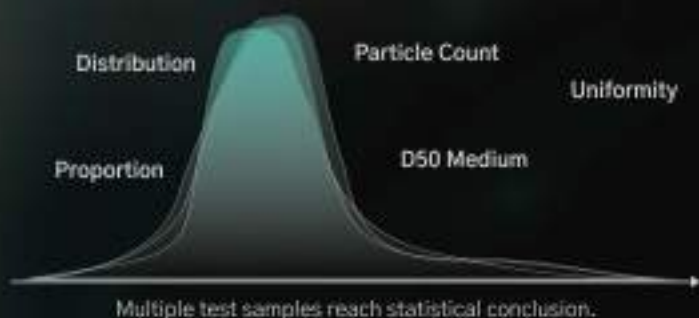
Particle Size Measuring Range

Highlights

Technology in
Particle Analysis

Auto Multi-sample Statistics

The DiFluid Omni is equipped with an intelligent uniformity judgment function, which allows for automatic multiple sampling and display of statistics such as total number of particles and median D50.



Auto Diffusor

The auto diffusor automatically vibrates the powder on the particle tray, liberating users from manual diffusing, thereby accelerating the process and ensuring accuracy through automation.

Whole Picture in a Teaspoon

The Omni needs just 0.05g of coffee powder for measurement. Utilize the provided micro powder scoop (1/64 teaspoon), drop the powder at the particle tray center, and leave the Omni to analyze automatically.



Smart Connection

Coffee data is digitized now.

DiFluid Omni and DiFluid Café app are deeply integrated, for data recording and querying. It can be linked with R series coffee refractometer and M series coffee scale to help users better understand and control coffee quality.



Coffee bean roast degree analysis



Coffee bean type management



Coffee info recording



Coffee bean distribution



Specifications and Package



Omni Body and Particle Tray



Roast Tray and Its Holder



Powder Scoop, Bean Scoop, and Brush



Scraper



Roast Calibration Plate

Body

Model: DFT - SD101

Body Weight: 310g

Light Source: Multi-band Near Infra-red (850nm, 940nm)

Screen: 2.8" HD touchscreen

Working Temperature: 0-45°C

Body Size: 109*79*102mm

Total Weight: 1.45kg

Performance

Roast Degree (Agtron)

0.1 resolution

±0.1 accuracy

0-150 measuring range

500 roast data memory

Particle Size (um)

1 resolution

100-2500 measuring range

500 particle data memory

Power & Battery

Lithium-ion battery

USB-C

5V=1A power supply

2500mAh max capacity

Product List

Omni main unit

Particle tray

Roast tray

Roast tray holder

Bean scoop

Particle scoop

Brush

Manual, warranty card, certificate of conformity

Scraper

Bag

USB-C charging cable

Factory test report

Toolbox

Roast calibration plate

DiFluid

Tracking Process,
Measure Success.

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