

SD-500/SD-501 Laboratory Mini Bench-top Spray Dryer, stainless steel type



ON-TABLE MODEL

The instrument can be placed on the experiment table, or Labfreez inert loop system SD-501, featuring small size and convenient operation;

FOR AQUEOUS SOLUTION AND ORGANIC SOLVENT

SD-500 laboratory spray dryer has the basic type and the organic solvent type SD-501 (with inert loop system). SD-500 laboratory spray dryer is for aqueous solution, which can simply be updated to organic solvent type after equipped with SD-501 inert loop system;

HOMOCENTRIC SPRAY ATOMIZER

During experiments, the new spray atomizer would never be off-center in atomization, and there won't be affected recovery rate by spraying on the bottle wall. The spray atomizer can change the spray site to improve the spray effect by moving up and down; notably, the spray atomizer has excellent adaptability to material with high viscosity and few blocking situation;

THE EXHAUST AIR IS DISCHARGED AFTER RECOVERY IN THE BAG FILTER

SD-500 laboratory spray dryer standard tail gas dedusting equipment can reduce environmental pollution while effectively improving the yield, especially the yield of difficult recycle;

CONTROLS & FUNCTIONALITY

SD-500 laboratory spray dryer is designed to ensure that all functions are simple to select and adjust, to quickly achieve the optimum conditions for spray drying. The operator can control the following functions:

- Inlet Temperature
- Gasflow Volume
- Pump Speed
- De-blocker Frequency

EASY TO USE

PLC automatic control, One-click boot.
Color Touch Screen, Fast setup and cleaning times



Scale up to pilot or industrial scale possible.
Visible process due to glass assembly
Adjustable particle size (1 – 25 microns)

TWO FLUID NOZZLE WITH SUS316L STAINLESS STEEL

The stainless steel spray assembly consists of an inner tube for the liquid sample leading to a small diameter jet. An outer tube directs compressed air to the nozzle. All units are supplied with 0.7mm jets, other sizes are available as accessories. The spray assembly incorporates an automatic de-blocking device that prevents the jet nozzle from becoming blocked, the de-blocking needle is activated by an integral compressor. De-blocking is sometimes necessary with materials which may solidify or when large particles in suspension cause blockages in the jet.

Trusted by the users Over 1,500 customers of top universities, enterprises and research institutes use our mini spray dryer. And exported to more than 40 countries & regions such as the United States, Italy, South Korea, Mexico, Singapore, Canada, Malaysia, Chile and Russia.



AREAS OF APPLICATION

SD-500 laboratory spray dryer can be used in a wide range of applications where the production of a free-flowing powder sample is required. This technique has successfully processed materials in the following areas:

Beverages • Flavours & Colourings
Milk & Egg Products • Plant & Vegetable Extracts
Pharmaceuticals • Heat Sensitive Materials
Plastics • Polymers and Resins • Perfumes
Ceramics & Advanced Materials
Soaps & Detergents • Blood • Dyestuffs
Foodstuffs • Adhesives • Oxides • Textiles
Bones, Teeth & Tooth Amalgam and many others



SPECIFICATIONS

Model	SD-500 lab spray dryer
Power	1500W
Voltage	220V, 50-60HZ
Min. Outlet Temp.	80°C
Evaporating Capacity	500ml/h
Airflow	0~330m ³ /h
Max. Inlet Temp	200°C
Heater power	1000W
Temp. precision	±1°C
Nozzle jet	0.7mm standard/(0.5/0.75/1.0/1.5/2.0mm available)
Nozzle type	Two fluid nozzle
Particle size range	1~25µm
Mean Residence Time	1~1.5 second
Operation mode	Automatic / Manual
Minimum Sample Volume	20ml
Spray Chamber Material	SUS304 Stainless Steel
Cyclone Separator Material	SUS304 Stainless Steel
Receiving Tank Material	SUS304 Stainless Steel
Body Material	SUS304 Stainless Steel
Seal of Cyclone/cylinder	Silicone
Gas type	Compressed Air(for aqueous)
Dimension	800*550*900mm
Weight	80KG
Display	7-Inch LCD for temperature, Spray, Pump, Air pressure, de-blocker frequency
Thermal Protection	Blower does not stop until temp <90°C
Deblocking	Automatic

Model	SD-501 lab spray dryer (with Inert Loop system for organic solvent)
Power	2500W
Voltage	220V, 50/60 Hz
Atomizer material	SUS 316 Stainless steel
Evaporating Capacity	500ml/h for water
Airflow	0-330 m ³ /h
max. Input temperature	200 °C
Heater power	1000W
Temperature precision	±1 °C
Spray gas	4.2m ³ /h, 2-5bar
Nozzle jet	0.7mm standard/(0.5/0.75/1.0/1.5/2.0mm available)
Nozzle type	Two fluid nozzle
Possible particle size range	1-25µm
Mean Residence time	1.0-1.5 sec

Operation mode	Automatic/Manual
Max. Sample feed	1500ml/hr
Minimum sample volume	30ml
Spray chamber material	SUS304 Stainless steel
Cyclone separator material	SUS304 Stainless steel
Receiving tank material	SUS304 Stainless steel
Body material	SUS304 Stainless steel
Seal of cyclone/cylinder	Silicone
Gas type	N2 (for solvent) or compressed air (for aqueous)
Sound	<60db
Dimensions	800*550*900 (spray dryer) 900*800*900(inert loop)
Weight	150KG
Display	7-Inch LCD display for Heat, Spray, Pump, Air pressure, de-blocker frequency
Thermal protection	Blower does not stop until temp <90 °C
Deblocking	Automatic
Inert loop (for organic solvents)	Yes

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