



Specialized in laboratory equipment

YC-015 LABORATORY SCALE SPRAY DRYER

SHANGHAI PILOTECH INSTRUMENT & EQUIPMENT CO., LTD



Focused · Perfection · Reputation · Innovation

The world leading R&D solution for Spray Drying

- Famous brand for spray dryer in China
- 15 years continuous development
- Over 1,500 customers all over the world



The Mini Spray Dryer YC-015 is the result of 15 years continuous development, is your choice for the quick and gentle drying to powder of liquid material.



The Mini Spray Dryer
YC-015 - innovative solutions for
spray drying in the laboratory

The impressive features of the Spray Dryer include its efficient performance with very short set-up times, an effective integrated nozzle cleaning mechanism and a high degree of flexibility thanks to the different cylinder geometries. The system was designed to be stand by a keyboard, conducted by a colorful crystal screen of touch guidance mode, and allowed two modes of run: Automatic-mode, and Eye-monitored mode for the purpose of easily controlling experimental process.

Controls & Functionality

YC-015 mini spray dryer is designed to ensure that all functions are simple to select and adjust, to quickly achieve the optimum conditions for spray drying. Both use a clear touch screen display, the operator can control the following functions:

- Inlet Temperature
- Airflow Volume
- Air compressor flow
- Pump Speed
- De-blocker Frequency



Easy to use



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-blocker is sometimes necessary with materials which may solidify or when large particles in suspension cause blockages in the jet.

Preparation convenience

The minimum of material only needs 20-30 ml, which is convenient for dealing with small amount of sample, and its maximum capacity can up to 2000ml/H as well as the dealing with vast material is also very rapidly.

Temperature protection

The heater has an extreme high temperature when experiment finished, which needs air blower to continue working in order to reduce the inside temperature and ensure the safety of equipment, YC-015 spray dryer can control air blower running automatically, even the operator wants to turn off the air blower, the system would prevent the operator until the temperature of system reduce to the default security state of system ;

Borosilicate glass or SUS 304 stainless steel

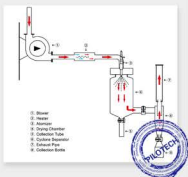
Spray chamber, cyclone separator, collector are all made of Borosilicate glass which can resist strong acid/alkali, high temperature.



It can work in a no-pollution and stable environment, and the whole process can be inspected. And we can provide SUS 304 stainless steel parts. All the spare parts are easy to install and clean.

PRINCIPLE

1. A menu driven micro-processor controller allows the selection of inlet temperature, airflow, automatic de-blocker frequency and pump speed.



2. The self-priming peristaltic pump delivers the sample liquid from a container through a small diameter jet into the main chamber. At the same time an integral compressor pumps air into the outer tube of the jet which causes the liquid to emerge as a fine atomised spray into the drying chamber.

3. Heated air is blown through the main chamber evaporating the liquid content of the atomised spray. The solid particles of the material, which are normally in a free flowing state, are then separated from the exhaust air flow by a cyclone and collected in the sample collection bottle. The exhaust airflow is directed through a flexible 60 mm diameter hose direct to atmosphere or to an existing extraction system.



Air compressor built-in

Oil free compressor built-in with cushion technique, lower noise and convenient to move the dryer. Compressed air container made from the SUS 304 stainless steel to avoid vapor corrosive damage;



Trusted by the users

Over 1,500 domestic 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 etc.



Wide range of applications

YC-015 mini 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:

- Oxide • Blood • Polymers and Resins
- Beverages • Flavours & Colourings
- Milk & Egg Products • Plant & Vegetable Extracts
- Pharmaceuticals • Heat Sensitive Materials
- Plastics • Perfumes • Dyestuffs
- Ceramics & Advanced Materials
- Soaps & Detergents • Textiles
- Foodstuffs • Adhesives



Mini spray dryer YC-015 technical data

Sr.no	Parameter	Pilotech YC-015 Mini Spray Dryer
1	Power	3500W
2	Voltage	220V,50/60 Hz
3	Atomizer material	SUS 316 Stainless steel
4	Evaporating Capacity	1.5 l/h for water
5	Airflow	0-330 m³/h
6	max. Input temperature	220°C
7	Heater power	3000W
8	Temperature precision	±1°C
9	Spray gas	4.2m³/h, 2-5bar
10	Nozzle jet	0.7mm standard/(0.5/0.75/1.0/1.5/2.0mm available)
11	Nozzle type	Two fluid nozzle
12	Possible particle size range	1-25µm
13	Mean Residence time	1.0-1.5 sec
14	Operation mode	Automatic/Manual
15	Max. Sample feed	2000ml/hr
16	Minimum sample volume	30ml
17	Spray chamber material	borosilicate glass
18	Cyclone separator material	borosilicate glass
19	Receiving tank material	borosilicate glass
20	Body material	SUS304 Stainless steel
21	Seal of cyclone/cylinder	Silicone
22	Compressor	Built-in oilless
23	Sound	<60db
24	Dimensions	750*650*1200
25	Weight	110KG
26	Display	7-Inch LCD display for Heat, Spray, Pump, Air pressure, de-blocker frequency
27	Thermal protection	Blower does not stop until temp <90°C
28	Deblocking	Automatic
29	Inert loop (for organic solvents)	Optional



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