



Specialized in laboratory equipment

YC-2000 MINI VACUUM 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



Mini Vacuum Spray Dryer YC-2000
The world leading R&D solution for Spray Drying

The Mini Spray Dryer
YC-2000 - innovative solutions for
spray drying in the laboratory

The Vacuum Spray Dryer YC-2000 is the result of 15 years continuous development, is your choice for the quick and gentle drying to powder of heat-sensitive material. 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 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.

Why need vacuum spray dryer?

The rapid drying of heat-sensitive material has been troubling plenty of researchers. Common vacuum drying and spray drying cause great damage to biological activity or structure of material. Freeze drying has disadvantages such as long drying time and low energy efficiency. Moreover, the material after freeze drying is lumpy and needs to be smashed a second time.

What can vacuum spray dryer do?

Shanghai Pilotech Instrument and Equipment Co., Ltd., after long-term communication with researchers, realizes that low-temperature spray drying is able to solve the problems of drying of heat-sensitive material effectively. Therefore, we developed the YC-2000 low-temperature spray dryer for laboratory.

The dryer not only inherits many advantages of YC-015 mini spray dryer, but also integrates the merits of vacuum drying creatively. It is capable of drying material rapidly (1 second) when the temperature of inlet air is around 50°C. The damage to activity or structure of material during drying is completely prevented.

It is a convenient and safe method for drying heat-sensitive material, such as biological products (e.g. enzyme preparation and viable bacteria), extract of natural product from traditional Chinese medicine with high sugar content, heat-labile high polymer material, and material that gasifies when contacting with heat.



Controls & Functionality

YC-2000 vacuum 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 – 100 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.



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-2000 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 ;

SUS 304 stainless steel

Spray chamber, cyclone separator, collector are all made of SUS 304 stainless steel . It can work in a no-pollution and stable environment,

and sight glass equipped so the whole process can be inspected. All the spare parts are easy to install and clean.



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.



香港科技大學
THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY



Wide range of applications

YC-2000 vacuum 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
- Bones, Teeth & Tooth Amalgam and many others

■ Mini Spray Dryer YC-2000

Sr.no.	Parameter	Pilotech YC-2000 vacuum spray dryer
1.	Power	7KW,380V,50/60 Hz
2.	Evaporating Capacity	1000~1500ml/h for water
3.	mini. Input temperature	50°C
4.	Heater power	3500W
5.	Spray gas	4.2m ³ /h, 2-5bar
6.	Nozzle jet	0.7mm standard/(0.5/0.75/1.0/1.5/2.0mm available)
7.	Nozzle type	Two fluid nozzle
8.	Possible particle size range	1-25µm
9.	Operation mode	Automatic/Manual
10.	Max. Sample feed	1500ml/hr
11.	Minimum sample volume	30ml
12.	Spray chamber material	SUS304 Stainless steel
13.	Inlet temperature	50~200°C
14.	Cyclone separator material	SUS-304 Stainless steel
15.	Body material	SUS-304 Stainless steel
16.	Seal of cyclone/cylinder	Silicone
17.	Outlet temperature	45°C
18.	Dimensions	1050*1050*1850
19.	Weight	170KG
20.	Display	7-Inch LCD display for Heat, Spray, Pump, Air pressure, de-blocker frequency
21.	Thermal protection	Blower does not stop until temp <90°C
22.	De-block	Automatic
23.	Atomizer material	SUS 316 Stainless steel



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