



About
PILOTECH

www.shpilotech.com



Leader For **SPRAY DRYER**

Pilotech has been engaged in spray drying for nearly 20 years. Our products are exported to more than 60 countries. Now we already have over 3,500 users around the world.

To be The **Leader for Spray Dryer** in the World –Pilotech

Pilotech started to produce laboratory spray dryer since 2005. We have over 50 patents and over 5 software copyrights.

Our company is also the only manufacturer in the world that can produce a wide range of spray dryers, including benchtop spray dryer, vacuum spray dryer, spray-freezing dryer, all-in-one machine for spray drying and fluidized granulator, organic solvent spray dryer and nano spray dryer.

Our laboratory spray dryer has many advantages, such as stable performance, easy operation and durable service. For this reason, the product is very popular among researchers. It has occupied more than 70% of the market in China. It is now used by more than 3,500 users in the world, and exported to more than 60 countries and regions, including USA, UK, Germany, Italy, Russia, South Korea, Singapore, Japan, Malaysia, Canada, Australia, South Africa, Taiwan and Hong Kong.



500 Papers on Google
Scholar

Pilotech JOURNEY

YC-015: The first lab two fluid spray dryer in China

Our laboratory spray dryer is very small, but it solves many problems. For example, with our product, you don't need to face the problems like difficulty in preparing materials, large coverage, and big noise.

2005

YC-1800: The first lab low temperature spray dryer in China

You don't need to worry that the materials containing sugar will stick on the wall when they are used for spray drying. You don't need to worry that the heat-sensitive materials, such as enzymic preparations, will degenerate when they are used for spray drying.

2007

YC-015A: The first inert loop spray dryer in China (for organic solvents)

It can also ensure safe spray drying of organic solvent in laboratory. With our product, both toxic and oxidizable materials can be treated with spray drying in laboratory.

2008

YC-1000: The first lab spray granulator in China

Only one machine can realize four functions, including spray drying, spray granulation, fluidized bed drying and fluidized bed coating.

2009

YC-2000: The first lab vacuum spray dryer in China

It is a perfect combination of vacuum drying and spray drying. The heat sensitive materials such as probiotics can remain active after spray drying in laboratory.

2010

YC-3000: The first lab spray freeze dryer in China

It is also a perfect combination of spray drying and freeze drying. Compared with freezer dryer, our spray dryer can provide a faster drying process, and the dried materials have better fluidity and solubility.

2011

2012

YC-018: The first pilot scale spray dryer, powder recovery rate can reach 92%

Our spray dryer for pilot plant test is also very small. It only covers an area of 1 square meter, but it has the processing capacity of 3L/H. It has the advantages, such as low noise, low power (only 5.5KW), and high material recovery rate.

YC-500: benchtop spray dryer

The processing capacity is 500ML/H. The minimum material volume is 30ML. Because it is very small, it can be placed on the workbench.

2013

2014

YC-501 and YC-018A: Inert loop spray dryer

YC-501 is the smallest organic solvent spray dryer. It can be applied to spray drying of very tinny materials. YC-018A is organic solvent spray dryer for pilot plant test. It applies to the preparation of materials in laboratory and pilot plant.

YC-510: Vacuum spray dryer, which contains high temperature type, vacuum low temperature type or inert loop type (optional)

YC-510 is a multifunctional device. It can be used as traditional laboratory spray dryer, vacuum spray dryer or organic solvent spray dryer (optional) to process different materials.

2016

2017

Developed a new concentric spray nozzle

If the materials are atomized by traditional spray nozzle, they can be easily sprayed to the wall of bottle, because traditional spray nozzle may have some defects in installation or spraying accuracy. So we recommend the concentric spray nozzle. The concentric spray nozzle has better performance. Its spray will form an umbrella around the nozzle.

Shanghai Pilotech Product Catalog

Pilotech Laboratory Spray Dryer Series



YC-500

Sr.no	Parameter	Pilotech YC-500 Bench-top Spray Dryer	Features
1	Power	2000W	<ol style="list-style-type: none"> 1. Small in size and suitable for use on the laboratory table. 2. It only needs 30ML to perform an experiment and it is easy to prepare for the materials. 3. It is easy to install and operate, and the installation and operation can be done easily by just one person. 4. It is equipped with a reserved interface, so it can be upgraded to the organic solvent spray dryer or the vacuum low temperature spray dryer.
2	Voltage	220V; single-phase; 50-60 Hz	
3	Capacity	500ml/h	
4	Rated airflow	1 m ³ /min	
5	Min. outlet temperature	80°C(related to the boiling point of the solvent)	
6	Max. inlet temperature	200°C	
7	Heater power	1500W	
8	Temperature precision	±1°C	
9	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
10	Nozzle type	Two fluid nozzle	
11	Possible particle size range	1-25µm	
12	Max. Sample feed	500ml/hr	
13	Minimum sample volume	30ml	
14	Gas type	Compressed air(for aqueous)	
15	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
16	Dimensions	800*600*900mm	
17	Inert loop (for organic solvents)	Optional	



YC-015

Sr.no	Parameter	Pilotech YC-015 Lab Spray Dryer	Features
1	Power	3500W	<ol style="list-style-type: none"> 1. Made of Borosilicate glass, which makes it easy to observe the whole experiment process. 2. It only needs 30ML to perform an experiment and it is easy to prepare for the materials. 3. Air compressor built-in and it does not need any external device. 4. It can be upgraded to the organic solvent spray dryer with inert loop system. 5. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.
2	Voltage	220V; single-phase, 50/60 Hz	
3	Atomizer material	SUS 316 Stainless steel	
4	Capacity	1.5 L/h	
5	Rated airflow	1.5 m ³ /h	
6	max. Inlet temperature	250°C	
7	Heater power	3000W	
8	Temperature precision	±1°C	
9	Compressed air	32L/min, 0.2-2bar	
10	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
11	Nozzle type	Two fluid nozzle	
12	Possible particle size range	1-25µm	
13	Mean Residence time	1.0-1.5 sec	
14	Max. Sample feed	2000ml/hr	
15	Minimum sample volume	30ml	
16	Spray chamber, Cyclone separator, Receiving tank, Body material	Borosilicate glass & SUS304 Stainless steel	
17	Compressor	Built-in oil-less	
18	Dimensions	750*650*1200mm	
19	Inert loop (for organic solvents)	Optional	



YC-018

Sr.no	Parameter	Pilotech YC-018 Lab Spray Dryer	Features
1	Power	5500W	<ol style="list-style-type: none"> 1. It has a high recovery rate which is up to 92%. 2. The capacity is 3000ml/h, and it only needs a minimum amount of 100ML materials to perform one experiment. Is suitable both for laboratory use and the pilot plant use. 3. It's suitable for the spray drying of sugary materials, and no stick to wall. 4. It can be upgraded to the organic solvent spray dryer with inert loop system. 5. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.
2	Voltage	220V; single-phase	
3	Frequency	50/60 Hz	
4	Max. Inlet temperature	280°C	
5	Compressed air	32L/min, 0.5-2 bar	
6	Rated airflow	2m ³ /min	
7	Nozzle type	Two fluid nozzle	
8	Nozzle jet	1.5mm standard/(0.5/0.8/1.0/2.0mm available)	
9	Heater power	5000W	
10	Possible particle size range	1-80µm	
11	Mean Residence time	1.0-1.5 sec	
12	Max. Sample feed	3000ml/hr	
13	Min. sample volume	100ml	
16	Body material	SUS-304 Stainless steel	
17	Dimensions	1050*1000*1770mm	
21	Inert loop (for organic solvents)	Optional	



YC-019

Sr.no	Parameter	Pilotech YC-019 pilot spray dryer	Features
1	Power	12KW	<p>1. It has a high recovery rate which is up to 92%.</p> <p>2. Pilot scale spray dryer with small size and large capacity, the capacity is 5000ml/h, and it only needs a minimum amount of 100ML materials to perform one experiment.</p> <p>3. Suitable for sugar-containing materials and heat-sensitive materials. It is also suitable for some materials that require high temperature drying.</p> <p>4. The particle size after drying is 1-100 microns, and the particle size range is wide, suitable for your different drying requirements.</p> <p>5. It can be upgraded to the organic solvent spray dryer with inert loop system.</p> <p>6. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.</p>
2	Voltage	380V; three-phase five-wire	
3	Frequency	50-60 Hz	
4	Compressed air	64L/min	
5	Rated airflow	2m ³ /min	
6	Air Inlet temperature	Max 300°C	
7	Heater power	9KW	
8	Temperature precision	±2°C	
9	Nozzle type	Two fluid nozzle	
10	Nozzle tip diameter	2.0mm standard/(0.5/0.8/1.0/1.5 available)	
11	Possible particle size range	1-100µm	
12	Max. Sample feed	5000ml/hr	
13	Min. sample volume	100ml	
14	Atomizer material	SUS 316 Stainless steel	
15	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
16	Dimensions	1100*1000*1900mm	
17	Inert loop (for organic solvents)	Optional	



YC-029

Sr.no	Parameter	Pilotech YC-029 pilot spray dryer	Features
1	Power	20KW	<p>1. It has a high recovery rate which is up to 92%.</p> <p>2. Pilot scale spray dryer covers less than 2 square meters, and large capacity, the capacity is 10L/h, and it only needs a minimum amount of 200ML materials to perform one experiment.</p> <p>3. The particle size after drying is 1-120 microns, and the particle size range is wide, suitable for your different drying requirements.</p> <p>4. Is not only suitable for drying ceramics, but also very efficient for drying of Pharma such as Chinese herbal extracts and natural product extracts. No auxiliary materials are needed during the drying process to produce powders with good fluidity.</p> <p>5. It can be used in industrials like minerals, metals, food, pharmaceutical, energy, paper, biology, chemicals, and materials.</p>
2	Voltage	380V; three-phase five-wire; 50-60 Hz	
3	Capacity	Max. 10L/h	
4	Rated airflow	4m ³ /min	
5	Heater power	18000W	
6	Max. Inlet temperature	260°C	
7	Compressed air	128L/min	
8	Nozzle type	Two fluid nozzle	
9	Nozzle jet	3mm standard	
10	Possible particle size range	1-120µm	
11	Temperature precision	±2°C	
12	Max. Sample feed	10000ml/hr	
13	Min. sample volume	200ml	
14	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel	
15	Dimensions	1650*1100*2700mm	
16	Atomizer material	SUS-316 Stainless steel	



YC-1800

Sr.no	Parameter	Pilotech YC-1800 low temperature spray dryer	Features
1	Power	4000W	<p>1. Perfect combination of low temperature and high temperature. With maximum inlet air temperature reaching 200 °C , it can meet high temperature drying requirements of ceramics and other materials; with minimum inlet air temperature being 105 °C , it is especially suitable for spray drying of traditional Chinese medicine, extracts of natural substances and other materials with sugar content. No material will adhere to the wall during drying and materials are featured with excellent fluidity after drying.</p> <p>2. 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, it 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.</p> <p>3. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.</p>
2	Voltage	220V; single-phase	
3	Frequency	50/60 Hz	
4	Capacity	1500ml/h for water	
5	Rated airflow	1.5 m ³ /min	
6	Max. Inlet temperature	200°C	
7	Heater power	3000W	
8	Temperature precision	±1°C	
9	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
10	Nozzle type	Two fluid nozzle	
11	Possible particle size range	1-25µm	
12	Mean Residence time	1.0-1.5 sec	
13	Max. Sample feed	1500ml/hr	
14	Minimum sample volume	30ml	
16	Atomizer material	SUS 316 Stainless steel	
17	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel & borosilicate glass	
18	Dimensions	950*800*1350mm	



YC-510

Sr.no	Parameter	Pilotech YC-510 Vacuum Spray Dryer	Features
1	Power	1500W(Spray dryer) 2000W(Vacuum system)	<p>1. Small size, multi-function, low noise, modular design, convenient installation and convenient use.</p> <p>2. The capacity is 500ml/h, and it only needs a minimum amount of 30ML materials to perform one experiment.</p> <p>3. Built-in low-temperature cooling circulation pump and oxygen monitoring system, organic solvent vapor condensation recovery, the nitrogen concentration in the system is higher than the safe setting, the system automatically shuts down to ensure your Safe.</p> <p>4. It can realize high temperature spray drying, vacuum low temperature spray drying and can be upgraded to organic solvent spray drying.</p> <p>It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.</p>
2	Voltage	220V; single-phase, 50-60Hz	
3	Min. outlet temperature	50°C	
4	Capacity	500ml/h	
5	Rated airflow	1.5 m ³ /min	
6	Max. inlet temperature	200°C	
7	Temperature precision	±1°C	
8	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
9	Nozzle type	Two fluid nozzle	
10	Possible particle size range	1-25µm	
11	Mean residence time	1.0-1.5 sec	
12	Minimum sample volume	30ml	
13	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
14	Dimensions	880*550*900mm(Spray dryer) 850*700*800(Vacuum system)	
15	Inert loop (for organic solvents)	Optional	



YC-2000

Sr.no	Parameter	Pilotech YC-2000 vacuum spray dryer	Features
1	Power	7KW; 380V; three-phase five-wire; 50/60 Hz	<ol style="list-style-type: none"> The world's first laboratory vacuum low temperature spray dryer The vacuum pump produces low noise as it has adopted the patented noise reduction technology. The minimum inlet air temperature is 65 °C, which is used for the fast and safe drying of probiotics and other materials without inactivating such materials. It is suitable for the spray drying of sugary materials, and it has a non-stick inner wall with a high recovery rate. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.
2	Capacity	1000~1500ml/h for water	
3	Min. Inlet temperature	65°C	
4	Heater power	3000W	
5	Temperature precision	±1°C	
6	Compressed air	32L/min	
7	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
8	Nozzle type	Two fluid nozzle	
9	Possible particle size range	1-100µm	
10	Max. Sample feed	1500ml/hr	
11	Minimum sample volume	30ml	
12	Inlet temperature	65~200°C	
13	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel	
14	Min. outlet temperature	45°C	
15	Dimensions	1050*1050*1850mm	
16	Atomizer material	SUS 316 Stainless steel	



YC-2100

Sr.no	Parameter	Pilotech YC-2100 vacuum spray dryer	Features
1	Power	9KW; 380V; three-phase five-wire; 50/60 Hz	<ol style="list-style-type: none"> Laboratory vacuum low temperature spray dryer, the best choice for heat sensitive materials The vacuum pump produces low noise as it has adopted the patented noise reduction technology. The minimum inlet air temperature is 50 °C, which is used for the fast and safe drying of probiotics and other materials without inactivating such materials. Suitable for sugary materials such as Chinese herbal & juices, the dried materials(powder) will not stick to the wall. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.
2	Capacity	Max. 3000ml/h	
3	Inlet temperature	50-200°C	
4	Outlet temperature	45-70°C	
5	Heater power	5500W	
6	Temperature precision	±1°C	
7	Compressed air	64L/min	
8	Nozzle jet	2.0mm standard/(0.5/0.8/1.0/1.5mm available)	
9	Nozzle type	Two fluid nozzle	
10	Possible particle size range	1-100µm	
11	Peristaltic pump	5000ml/hr	
12	Minimum sample volume	50ml	
13	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel	
14	Dimensions	1250*1050*1850mm	
15	Atomizer material	SUS 316 Stainless steel	



YC-3100

Sr.no	Parameter	Pilotech YC-3100 vacuum spray dryer	Features
1	Power	20KW	<ol style="list-style-type: none"> Laboratory vacuum spray dryer, the best choice for heat sensitive materials The vacuum pump produces low noise as it has adopted the patented noise reduction technology. The minimum inlet air temperature is 70 °C, which is used for the fast and safe drying of probiotics and other materials without inactivating such materials. Suitable for sugary materials such as Chinese herbal & juices, the dried materials(powder) will not stick to the wall. It can be used in chemical, food, new energy, medicine, biology, materials, ceramics, energy, textile and other industries.
2	Voltage	380V; three-phase five-wire; 50-60 Hz	
3	Capacity	6000-10000ml/h for water	
4	Compressed air	128L/min	
5	Heater power	18000W	
6	Min. inlet temperature	70°C	
7	Min. outlet temperature	50°C	
8	Temperature precision	±2°C	
9	Possible particle size range	1-120µm	
10	Nozzle type	Two fluid nozzle	
11	Nozzle jet	3mm standard	
12	Max. Sample feed	10000ml/hr	
13	Min. sample volume	200ml	
14	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel	
15	Atomizer material	SUS-316 Stainless steel	



YC-501

Sr.no	Parameter	Pilotech YC-501 Inert Loop Spray Dryer	Features
1	Power	2500W	<ol style="list-style-type: none"> The smallest inert loop spray dryer in the market. It covers an area of less than 1 square meter. The capacity is 500ml/h, and it only needs a minimum amount of 50ML materials to perform one experiment. Modular design, no need to connect the nitrogen circulation system (inert loop) when drying aqueous solutions. It can be upgraded to vacuum low temperature spray dryer with vacuum system. It is suitable for spray drying of various organic solvents such as methanol, ethanol, acetone, ether, toluene and other organic solvents. It is also widely used in medicine, food, chemical industry, polymer materials, ceramics, energy and other industries.
2	Voltage	220V; single-phase; 50-60Hz	
3	Min. outlet temperature	40°C (related to the boiling point of the solvent)	
4	Capacity	500ml/h	
5	Rated airflow	1.5 m³/min	
6	Max. inlet temperature	200°C	
7	Heater power	1500W	
8	Temperature precision	±1°C	
9	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
10	Nozzle type	Two fluid nozzle	
11	Possible particle size range	1-25µm	
12	Mean residence time	1.0-1.5 sec	
13	Minimum sample volume	50ml	
14	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
15	Gas type	N ₂ (for solvent) or compressed air (for aqueous)	
16	Dimensions	880*550*900mm (Spray dryer), 900*800*900mm (Inert loop system)	
17	Inert loop (for organic solvents)	Yes	



YC-015A

Sr.no	Parameter	Pilotech YC-015A Inert Loop Spray Dryer	Features
1	Power	3500W	1. Small size and low noise. It is also movable as it is equipped with wheels. 2. The capacity is 1500ml/h, and it only needs a minimum amount of 30ML materials to perform one experiment. 3. It adopts closed cycle of nitrogen (or other inert gas), a safe gas, to keep the entire system in a closed state, and on-line monitoring of oxygen concentration such that the system would power off automatically and alarm when the oxygen concentration has reached 2.5% (which can be preset by the user as needed). 4. The combination of closed nitrogen cycle and full solvent recovery allows treatment of flammable and toxic solvents and drying of readily oxidizable material. In addition, the low boiling points of organic solvents allow low temperature drying of the material subject to heat denaturation. 5. It is suitable for spray drying of various organic solvents such as methanol, ethanol, acetone, ether, toluene and other organic solvents. It is also widely used in medicine, food, chemical industry, polymer materials, ceramics, energy and other industries.
2	Voltage	without chiller; 220V; single-phase; with chiller; 380V; three-phase five-wire ; 50-60Hz	
3	Min. outlet temperature	40°C (related to the boiling point of the solvent)	
4	Capacity	1500ml/h	
5	Rated airflow	1.5 m ³ /min	
6	Max. Inlet temperature	200°C	
7	Heater power	3000W	
8	Temperature precision	±1°C	
9	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
10	Nozzle type	Two fluid nozzle	
11	Possible particle size range	1-25µm	
12	Mean Residence time	1.0-1.5 sec	
13	Max. Sample feed	1500ml/hr	
14	Minimum sample volume	30ml	
15	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
16	Gas type	N ₂ (for solvent) or compressed air (for aqueous)	
17	Dimensions	1050*1000*1500mm	
18	Inert loop (for organic solvents)	Yes	



YC-018A

Sr.no	Parameter	Pilotech YC-018A inert loop spray dryer	Features
1	Power	5500W	1. The smallest size pilot scale organic solvent spray dryer. 2. The capacity is 3000ml/h, and it only needs a minimum amount of 100ML materials to perform one experiment. 3. It adopts closed cycle of nitrogen (or other inert gas), a safe gas, to keep the entire system in a closed state, and on-line monitoring of oxygen concentration such that the system would power off automatically and alarm when the oxygen concentration has reached 2.5% (which can be preset by the user as needed). 4. The combination of closed nitrogen cycle and full solvent recovery allows treatment of flammable and toxic solvents and drying of readily oxidizable material. In addition, the low boiling points of organic solvents allow low temperature drying of the material subject to heat denaturation. 5. It is suitable for spray drying of various organic solvents such as methanol, ethanol, acetone, ether, toluene and other organic solvents. It is also widely used in medicine, food, chemical industry, polymer materials, ceramics, energy and other industries.
2	Voltage	without chiller; 220V; single-phase; with chiller; 380V; three-phase five-wire ; 50-60Hz	
3	Min. Outlet temperature	40°C (related to the boiling point of the solvent)	
4	Max. Inlet temperature	200°C	
5	Capacity	3000ml/h	
6	Rated airflow	1.5m ³ /min	
7	Nozzle type	Two fluid nozzle	
8	Nozzle jet	1.5mm standard/(0.5/0.8/1.0/2.0mm available)	
9	Heater power	4500W	
10	Possible particle size range	1-80µm	
11	Temperature precision	±2°C	
12	Max. Sample feed	3000ml/hr	
13	Min. sample volume	100ml	
14	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS-304 Stainless steel	
15	Gas type	N ₂ (for solvent) or compressed air (for aqueous)	
16	Dimensions	1050*1000*1750mm	
17	Inert loop (for organic solvents)	Yes	



YC-019A

Sr.no	Parameter	Pilotech YC-019A pilot inert loop spray dryer	Features
1	Power	11.5KW	1. Pilot scale organic solvent spray dryer. The capacity is 5000ml/h, and it only needs a minimum amount of 100ML materials to perform one experiment. 2. It adopts closed cycle of nitrogen (or other inert gas), a safe gas, to keep the entire system in a closed state, and on-line monitoring of oxygen concentration such that the system would power off automatically and alarm when the oxygen concentration has reached 2.5% (which can be preset by the user as needed). 3. The combination of closed nitrogen cycle and full solvent recovery allows treatment of flammable and toxic solvents and drying of readily oxidizable material. In addition, the low boiling points of organic solvents allow low temperature drying of the material subject to heat denaturation. It is suitable for spray drying of various organic solvents such as methanol, ethanol, acetone, ether, toluene and other organic solvents. It is also widely used in medicine, food, chemical industry, polymer materials, ceramics, energy and other industries.
2	Voltage	380V; three-phase five-wire	
3	Frequency	50-60 Hz	
4	Rated airflow	3m ³ /min	
5	Max. Inlet temperature	260°C	
6	Temperature precision	±2°C	
7	Nozzle type	Two fluid nozzle	
8	Nozzle tip diameter	2.0mm standard/(0.5/0.8/1.0/1.5 available)	
9	Possible particle size range	3-100µm	
10	Capacity	5000ml/hr	
11	Min. sample volume	100ml	
12	Atomizer material	SUS 316 Stainless steel	
13	Spray chamber, Cyclone separator, Receiving tank, Body material	SUS304 Stainless steel	
14	Inert loop (for organic solvents)	Yes	

Pilotech Laboratory Spray Freeze Dryer Series



YC-01

Sr.no	Parameter	Pilotech YC-01 spray freeze granulator	Features
1	Power	220V; single-phase; 10A	1. New laboratory freeze dryer with fast drying speed, the shortest time only needs 3-5 hours. 2. The dried material is powder, the particles are uniform, there is no need to be pulverized again. 3. Suitable for heat-sensitive materials, the dried materials will not be denaturation. 4. The dried materials have good solubility and fluidity.
2	Capacity	Max. 3L/batch	
3	Pump flow range	Max.1500mL/h	
4	Freezing temperature	<-80°C	
5	Cold trap temperature	≤-60°C	
6	Environment temperature	5~35°C	
7	Spray pressure	0.5-2 bar(adjustable)	
8	Liquid nitrogen consumption	10-20L/h	
9	Compressed air	32L/min	
11	Particle size	5~200μm	
12	Nozzle type	Two fluid nozzle	
13	Nozzle tip diameter	1.0mm standard	
14	Body material	SUS-304 Stainless steel	
15	Dimensions	850*850*1400mm	



YC-3000

Sr.no	Parameter	Pilotech YC-3000 spray freezing dryer	Features
1	Power	12KW	1. Adopts a cooling system of air-cooled condensing closed compressor with rapid cooling performance, low freezing temperature and strong moisture absorption ability. Temperature and vacuum degree are displayed in a digital, accurate, and direct mode. 2. Vacuum pump built-in. The convenient and reliable vacuum connection adopts international standard clamp. 3. In dehydration, the present equipment heats and sublimates natural air to maintain the security of samples. Stable performance, easy operation and low noise. 4. Compared with traditional freeze dryer: rapid freeze-drying of wall sticking and organism containing liquid materials (juice, traditional Chinese medicine extract, etc). The powder size is adjustable within a certain range. 5. It can be used for low-temperature dehydration of heat-sensitive, viscous, active and high sugar materials, such as Chinese herbal medicine and nature product extract, dairy product, biological agent, enzyme, fruit original juice, and polymer materials.
2	Voltage	380V; three-phase five-wire	
3	Capacity	1000/batch	
4	Spray freezing temperature	<-30°C	
5	Cold trap temperature	≤-60°C	
6	Vacuum pump power	1.1KW	
7	Max. vacuum pressure	<20Pa	
8	Spray pressure	1-3Bar(adjustable)	
9	Compressed air	32L/min	
11	Particle size	1~100μm	
12	Nozzle type	Two fluid nozzle	
13	Nozzle tip diameter	1.5mm standard/(0.5/0.8/1.0/2.0mm available)	
14	Body material	SUS-304 Stainless steel	
15	Dimensions	1600*1080*1750mm	

Pilotech Laboratory Fluid Bed Dryer Series



YC-310

Sr.no	Parameter	Pilotech YC-310 fluid bed dryer	Features
1	Function	fluid bed drying, granulator, coating, mixing	1. Small-sized lab fluid bed dryer, which can be used for lab fluidized bed drying, fluidized bed granulation and fluidized bed coating. 2. Can be placed on the bench or mounted with wheel for use on the floor. 3. The minimum material volume is 100 grams, which is convenient for material preparation. 4. Good granulation and coating effect, uniform granules after granulation. 5. Suitable for granulation of different materials, very good granulation effect on sugary materials.
2	Spray granulator capacity	Max. 300g/batch	
3	Minimum sample volume	100g	
4	granulator temperature	40-150°C	
5	Compressed air	3bar	
6	Coating	Max. 300g/batch	
7	Mixing	Max. 300g/batch	
8	Nozzle type	Two fluid nozzle	
9	Nozzle jet	0.8mm for coating, 1.0mm for granulating	
10	Rated airflow	120 m³/h	
11	Peristaltic pump	Max. 1000ml/h	
12	Power	220V; single-phase; 3KW	
13	Main chamber, Body material	SUS304 Stainless steel & High borosilicate glass	
14	Dimensions	700*600*1150mm	



YC-1000

Sr.no	Parameter	Pilotech YC-1000 fluid bed dryer	Features
1	Function	Spray drying, fluid bed granulation, coating, mixing	<ol style="list-style-type: none"> One machine can be used for spray drying, fluidized bed drying, fluidized bed granulation and fluidized bed coating. Spray drying is a low temperature type, suitable for spray drying of traditional Chinese medicine & natural product extracts, which has no wall sticking. The minimum material volume is 50 grams, which is convenient for material preparation. Good granulation and coating effect, uniform granules after granulation. New backflushing system, high material yield. Suitable for granulation of different materials, very good granulation effect on sugary materials.
2	Power	5KW, 220V, 50-60Hz	
3	Capacity for granulator	Max. 1000g/batch	
4	Capacity for spray drying	Max. 1500ml/h	
5	Minimum material volume	50g	
6	Granulator temperature	40-150°C	
7	Spray dryer inlet temperature	105-200°C	
8	Compressed air	1-3bar	
9	Temperature precision	±1°C	
10	Coating	50-1000g/batch	
11	Mixing	50-1000g/batch	
12	Nozzle type	Two fluid nozzle	
13	Nozzle jet	1.0mm standard/(0.5/0.8/1.5/2.0mm available)	
14	Rated airflow	0-150 m³/h	
15	Peristaltic pump	Max. 1500ml/h	
16	Main chamber volume	10L	
17	Heater power	3KW	
18	Main chamber, Body material	SUS304 Stainless steel & High borosilicate glass	
19	Sound	<60db	
20	Dimensions	900*800*1300mm	



YC-03

Sr.no	Parameter	Pilotech YC-03 Fluid Bed Dryer	Features
1	Function	Spray granulator, coating, fluid bed drying, mixing	<ol style="list-style-type: none"> From a small test to pilot scale, one machine is enough to complete the whole process, which can process 500g-3000g/time. The granules after granulation have good fluidity, firmness, and solubility. Good granulation and coating effect, uniform granules after granulation. Three different spray types, top-spray, tangential spray and bottom spray system. Suitable for high viscosity and sugary materials, high material yield. Suitable for protein, enzyme preparation, traditional Chinese medicine, food and accessories, materials, etc.
2	Spray granulator capacity	Max. 3000g/batch	
3	Minimum sample volume	500g	
4	granulator temperature	40-150°C	
5	Compressed air	1-4bar	
6	Coating	Max. 3000g/batch	
7	Mixing	Max. 3000g/batch	
8	Nozzle type	Two fluid nozzle	
9	Nozzle jet	0.8mm for coating, 1.0mm for granulating	
10	Rated airflow	240 m³/h	
11	Peristaltic pump	Max. 3000ml/h	
12	Main chamber volume	30L	
13	Heater power	380V; three-phase five-wire; 8KW	
14	Main chamber, Body material	SUS304 Stainless steel	
15	Dimensions	1450*1180*2290mm	

Pilotech Laboratory Multifunctional Extraction Tank Series



YC-010

Sr.no	Parameter	Pilotech YC-010 Lab Extraction Tank	Features
1	Power	4500W	<ol style="list-style-type: none"> Low noise, small size which covers an area of less than one square meter, with comprehensive functions. It can achieve hot reflux extraction, vacuum low-temperature extraction, vacuum low-temperature concentration, and volatile aromatic oil recovery. Built-in SUS304 stainless steel and low-noise water ring vacuum pump has little impact on the laboratory environment Suitable for the extraction of active ingredients from traditional Chinese medicine and natural products. Suitable for vacuum low-temperature extraction and concentration of materials.
2	Voltage	380V	
3	Extraction tank volume	10L	
4	Machine Material	SUS 304 Stainless Steel	
5	Evaporation chamber vacuum degree	0~-0.08MPa	
6	Precision of temperature	±2°C	
7	Cooling water	0.5t/h	
8	Cooling water pressure	<0.3pa	
9	Coiled tube condenser area	0.5 m²	
10	Dimension	1150*800*1600mm (Reference Size)	
11	Configuration	Stainless steel extractor (10L), Tube array condensator, coiled tube condenser, oil-water separator, pipeline sight glass, Stainless steel water ring pump, Omron temperature controller, Stainless steel extract blue, electric heater, Sanitary safety valve, control cabinet, connection with pipe Tube Fitting Valve	



YC-020

Sr.no	Parameter	Pilotech YC-020 Lab Extraction Tank	Features
1	Power	Three-phase five-wire; 9KW.	1. Built-in extracting basket, easy to take the materials 2. It can achieve hot reflux extraction, vacuum low-temperature extraction, vacuum low-temperature concentration, and volatile aromatic oil recovery. 3. Built-in SUS304 stainless steel and low-noise water ring vacuum pump has little impact on the laboratory environment 4. Suitable for extraction and concentration of herbal liquid and tea and fruit juice in research institutions, universities, hospitals, pharmaceutical factory and food industry. 5. Suitable for vacuum low-temperature extraction and concentration of materials.
2	Voltage	380V	
3	Extraction tank volume	20L	
4	Machine Material	SUS 304 Stainless Steel	
5	Evaporation chamber vacuum degree	0~0.08MPa	
6	Precision of temperature	±2℃	
7	Cooling water	1t/h	
8	Cooling water pressure	<0.3pa	
9	Coiled tube condenser area	0.5 m ²	
10	Dimension	1850*1000*1850mm (Reference Size)	
11	Configuration	Stainless steel extractor (20L), Tube array condensator, coiled tube condenser, oil-water separator, pipeline sight glass, Stainless steel water ring pump, Omron temperature controller, Stainless steel extract blue, electric heater, Sanitary safety valve, control cabinet, connection with pipe Tube Fitting Valve	



YC-050

Sr.no	Parameter	Pilotech YC-050 Lab Extraction Tank	Features
1	Power	Three-phase five-wire; 18KW.	1. It can be extracted under normal pressure or reduced pressure, and the extract can be concentrated under reduced pressure and low temperature. 2. It can achieve hot reflux extraction, vacuum low-temperature extraction, vacuum low-temperature concentration, and volatile aromatic oil recovery. 3. Built-in SUS304 stainless steel and low-noise water ring vacuum pump has little impact on the laboratory environment 4. Suitable for extraction and concentration of herbal liquid and tea and fruit juice in research institutions, universities, hospitals, pharmaceutical factory and food industry. 5. Suitable for extracting flavor substances such as caffeine in coffee, and other compounds
2	Voltage	380V	
3	Extraction tank volume	50L	
4	Machine Material	SUS 304 Stainless Steel	
5	Evaporation chamber vacuum degree	0~0.08MPa	
6	Precision of temperature	±2℃	
7	Cooling water	2t/h	
8	Cooling water pressure	<0.3pa	
9	Coiled tube condenser area	2 m ²	
10	Dimension	1850*1000*1980mm (Reference Size)	
11	Configuration	Stainless steel extractor (50L), Tube array condensator, coiled tube condenser, oil-water separator, pipeline sight glass, Stainless steel water ring pump, Omron temperature controller, Stainless steel extract blue, electric heater, Sanitary safety valve, control cabinet, connection with pipe Tube Fitting Valve	



YC-100

Sr.no	Parameter	Pilotech YC-100 Lab Extraction Tank	Features
1	Power	Three-phase five-wire; 27KW.	1. Small in size, low noise, jacketed heating method, safe and reliable, with built-in stainless steel water ring vacuum pump to achieve vacuum pressure-reduction and low-temperature extraction. 2. The part in contact with the material is made of SUS304 stainless steel and meets GMP regulations. 3. Vacuum low-temperature extraction and concentration, the material active ingredients (tea polyphenols and aroma substances, etc.) are less lost. 4. Suitable for the effective extraction of tea, fruit, Chinese herbal medicine, and natural products.
2	Voltage	380V	
3	Extraction tank volume	100L	
4	Machine Material	SUS 304 Stainless Steel	
5	Evaporation chamber vacuum degree	0~0.08MPa	
6	Precision of temperature	±2℃	
7	Cooling water	3t/h	
8	Cooling water pressure	<0.3pa	
9	Coiled tube condenser area	3 m ²	
10	Dimension	2100*1150*2150mm(Reference Size)	
11	Configuration	Stainless steel extractor (100L), Tube array condensator, coiled tube condenser, oil-water separator, pipeline sight glass, Stainless steel water ring pump, Omron temperature controller, Stainless steel extract blue, electric heater, Sanitary safety valve, control cabinet, connection with pipe Tube Fitting Valve	



YC-200

Sr.no	Parameter	Pilotech YC-200 Lab Extraction Tank	Features
1	Power	Three-phase five-wire; 48KW.	<p>1. Multi-function: Heat reflux extraction, vacuum low-temperature extraction, seepage extraction, vacuum low-temperature concentration, and volatile aromatic oil recovery.</p> <p>2. The part in contact with the material is made of SUS304 stainless steel and meets GMP regulations.</p> <p>3. It adopts integrated design and is equipped with wheels so as to realize mobility. It only needs to occupy a small area and is easy to operate.</p> <p>4. Suitable for efficient extraction and concentration of active ingredients of laboratory plants.</p>
2	Voltage	380V	
3	Extraction tank volume	200L	
4	Machine Material	SUS 304 Stainless Steel	
5	Evaporation chamber vacuum degree	0~0.08MPa	
6	Precision of temperature	±2℃	
7	Cooling water	3.5t/h	
8	Cooling water pressure	<0.3pa	
9	Coiled tube condenser area	3 m ²	
10	Dimension	2250*1000*2500 mm(Reference Size)	
11	Configuration	Stainless steel extractor (200L), Tube array condensator, coiled tube condenser, oil-water separator, pipeline sight glass, Stainless steel water ring pump, Omron temperature controller, Stainless steel extract blue, electric heater, Sanitary safety valve, control cabinet, connection with pipe Tube Fitting Valve	

Pilotech Other Laboratory Equipments



YC-910

Sr.no	Parameter	Pilotech YC-910 Extrusion Spheronizer	Features
1	Power	Three-phase five-wire; 6KW.	<p>1. One machine with multiple functions: Extrusion, spheronization, granulation, drying, coating.</p> <p>2. Built-in ice water unit, cooling the extrusion screw and cylinder at the same time, reducing the material temperature, effectively preventing material denaturation caused by extrusion heating.</p> <p>3. It is used in pharmaceutical, ceramic, catalyst and chemical industries, which is an ideal tool for the development of pellets and extrusion properties.</p>
2	Voltage	380V	
3	Capacity	1-3KG/H	
4	Extrusion speed	50RPM	
5	Spheronization speed	1400RPM	
6	Pellet diameter	0.8-3mm	
7	Diameter Of Rotary Tabel	250mm	
8	Screen diameter	0.7/1.0/1.5/2.0/3.0mm (Optional)	
9	Coating air volume	2.4m ³ /min	
10	Dimension	1150*700*1350mm(Reference Size)	
11	Compressed air	0.3m ³ /h	



YC-02
(With filling system)

Sr.no	Parameter	Pilotech YC-02 UHT Sterilizer with Filling System	Features
1	Power	380V; three-phase five-wire; 13KW; 50/60Hz,	<p>1. Complete simulation of ultra-high temperature sterilization of dairy and beverage production in the laboratory.</p> <p>2. Processing capacity is 20L/H, the minimum material volume is 3~5L.</p> <p>3. The maximum sterilization temperature is up to 145°C, and there is tube type, plate type, tube-plate combination type, online CIP and SIP, touch screen control, easy to operate, equipped with an online aseptic filling chamber.</p>
2	Rated Capacity	20-25L/h	
3	Min. sample	3-5L	
4	Max. Heating temperature	145°C	
5	Cooling temperature	About 50°C or 10°C (optional cooling unit)	
6	Heating unit	Heat hot water recirculators	
7	Temperature control	PID control	
8	Heating precision	±0.5°C	
9	Sterilizing time	5s 10s standard / (30s 300s optional)	
10	System pressure	5 bar	
12	Clean	CIP(400LPH)	
13	Dimensions	1150*910*1650mm	
14	Body material	SUS304 Stainless steel	
15	Material touch part	SUS316L(optional)	
The parameters of the filling system			
16	Filling system	Sterile cabinet	
17	Filtering membrane	HEPA(filter efficiency 99.99%)	
18	PET bottle	suitable	
19	Jacketed filling device	10L(5L)	
20	Filling valve	Air operated filling device	
21	Ozone generating system	optional	



YC-02

Sr.no	Parameter	Pilotech YC-02 UHT sterilizer	Features
1	Power	380V; three-phase five-wire; 13KW; 50/60Hz,	<p>1. Complete simulation of ultra-high temperature sterilization of dairy and beverage production in the laboratory.</p> <p>2. Processing capacity is 20L/H, the minimum material volume is 3~5L.</p> <p>3. The maximum sterilization temperature is up to 145°C, and there is tube type, plate type, tube-plate combination type, online CIP and SIP, touch screen control, easy to operate, an online aseptic filling chamber (optional).</p>
2	Rated Capacity	20-25L/h	
3	Min. sample	3-5L	
4	Max. Heating temperature	145°C	
5	Cooling temperature	About 50°C or 10°C (optional cooling unit)	
6	Heating unit	Heat hot water recirculators	
7	Temperature control	PID control	
8	Heating precision	±0.5°C	
9	Sterilizing time	5s 10s standard / (30s 300s optional)	
10	System pressure	5 bar	
12	Clean	CIP(400LPH)	
13	Dimensions	1150*910*1650mm	
14	Body material	SUS304 Stainless steel	
15	Material touch part	SUS316L(optional)	
The parameters of the filling system (optional filling system)			
16	Filling system	Sterile cabinet	
17	Filtering membrane	HEPA(filter efficiency 99.99%)	
18	PET bottle	suitable	
19	Jacketed filling device	10L(5L)	
20	Filling valve	Air operated filling device	
21	Ozone generating system	optional	



YC-02
(With homogenizer)

Sr.no	Parameter	Pilotech YC-02 UHT Sterilizer with homogenizer	Features
1	Power	380V; three-phase five-wire; 13KW; 50/60Hz,	<p>1. Complete simulation of ultra-high temperature sterilization of dairy and beverage production in the laboratory.</p> <p>2. Processing capacity is 20L/H, the minimum material volume is 3~5L.</p> <p>3. The maximum sterilization temperature is up to 145°C, and there is tube type, plate type, tube-plate combination type, online CIP and SIP, touch screen control, easy to operate, equipped with homogenizer.</p>
2	Rated Capacity	20-25L/h	
3	Min. sample	3-5L	
4	Max. Heating temperature	145°C	
5	Cooling temperature	About 50°C or 10°C (optional cooling unit)	
6	Heating unit	Heat hot water recirculators	
7	Temperature control	PID control	
8	Heating precision	±0.5°C	
9	Sterilizing time	5s 10s standard / (30s 300s optional)	
10	System pressure	5 bar	
12	Clean	CIP(400LPH)	
13	Dimensions	1150*910*1650mm	
14	Body material	SUS304 Stainless steel	
15	Material touch part	SUS316L(optional)	
The parameters of the homogenizer			
16	Power	2.2Kw, 380V, 50Hz	
17	Capacity	50(L/H)	
18	Max. Pressure	70(Mpa)	
19	Triplex Plunger Pump	No pulse	
20	Nominal pressure	0-60(Mpa)	
21	Body Material	SUS304 Stainless Steel	



YC-210

Sr.no	Parameter	Pilotech YC-210 Wiped Film Evaporator	Features
1	Power	Supply 3000W	<p>1. It's a new type of Wiped Film Evaporator - Flash Evaporator, and it is usually used in laboratories to replace rotary evaporators. Because of its non-stop input and output of materials, the equipment is more efficient and can be used in more circumstances.</p> <p>2. It has a simple structure that is very stable and reliable. Staff at the labs can comfortably operate it with only one hand.</p> <p>3. It requires a very short concentration time (less than 30 seconds), which means the materials are heated only for a short time, so it's really suitable for heat-sensitive materials.</p>
2	Voltage	single-phase; 220V; 50/60Hz	
3	Capacity	1-3L/h	
4	Evaporation area	0.6 m ²	
5	Solvent evaporation amount	1200ml/h	
6	Condensation area	0.5 m ²	
7	Feeding method	Needle valve	
8	Scraper speed	100-1200RPM (Stepless)	
9	Temperature control	PID control	
10	Heating precision	±1°C	



YC-610

Sr.no	Parameter	Pilotech YC-610 High-efficiency Tablet Coater	Features
1	Power	Supply 3500W; 220V; single-phase; 50/60Hz	1. Micro-material coating design: A micro-tablet coating pot can be selected according to customer needs to solve the problem of micro-tablet coating. 2. High coating efficiency: The air inlet and outlet are designed with wind collecting ducts to improve ventilation efficiency and tablet bed heat exchange efficiency, thereby improving coating efficiency. 3. Unique spray head design with adjustable spray head fan to meet the coating needs of different pots and batches. 4. It is used for coating experiments on tablets, capsules, film coatings, enteric coatings and more.
2	Capacity	100g-400g/batch	
3	Air consumption	0.6m ³ /minute	
4	Minimum material	100g	
5	Coating pot specifications	φ210mm standard (φ260mm and φ300mm optional), different specifications can be customized as required	
6	Motor stepless speed	The motor speed can be set on the touch screen	
7	Motor power	370W	
8	Temperature control	PID control	
9	Blower	1.5 m ³ /minute	
10	Spray head	With adjustable fan surface	
11	Interface	7" color touch screen	
12	Deflector	Z-shaped design	
13	PLC	Air inlet temperature, coating pot temperature, fan frequency, atomization pressure, needle action time, coating pot rolling frequency, atomization feed speed	
14	Material	SUS304 Stainless steel	



Contact Us



Tel

0086-21-54243466 54243425 67899810



Fax

0086-21-67899821



Email

sales@shpilotech.com



Business address

1801, Pinggao Plaza No.88 Jiufeng Rd. Songjiang District, Shanghai, P.R.C 201600



Factory address

No.77 Gangxing Rd. Songjiang District, Shanghai, P.R.C

