

SD-18/SD-1800A Pilot Spray Dryer for Large Particle, water-based or organic solvent can be process



SD-18 mini spray dryer is self contained and supplied complete and ready for immediate operation. All major components are housed within a stainless steel cabinet and the unit can be used on a bench top or with an optional stainless steel stand. 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.

SD-18 MINI SPRAY APPLICATIONS

SD-18 mini spray dryer can be used in a wide range of applications where the production of a free-flowing powder sample (10-120µm) is required. This technique has successfully processed materials in the following areas: Beverages • Flavours and Colourings • Milk and Egg Products • Plant and Vegetable Extracts • Pharmaceuticals • Heat Sensitive Materials • Plastics • Polymers and Resins • Perfumes • Ceramics and Advanced Materials • Soaps and Detergents • Blood • Dyestuffs • Foodstuffs • Adhesives • Oxides • Textiles • Bones, Teeth and Tooth Amalgam and many others. Most solutions and suspensions can be spray dried providing that the resulting product has the characteristics of a solid material.

SD-18 MINI SPRAY DRYER TECHNIQUE

1. A menu driven microprocessor controller allows the selection of inlet temperature, airflow, automatic de-blocker frequency and pump speed. The controller features an USB output for connection to a PC or datalogger and software allows the control and monitoring of all functions and printing of results(optional).
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 atomized spray into the drying chamber.
3. Heated air is blown through the main chamber evaporating the liquid content of the atomized 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.



ADVANTAGES

1. Two modes of run: Automatic-mode, and Eye-monitored mode for the purpose of easily controlling experimental process . PLC controller, LCD touch panel control fascia with flow path of system.
2. Air oilless compressor , the sound is low than 60db
3. Made of SUS-316 Stainless steel. Easy operating.
4. To assure accurate temperature control and easy parameter adjusting, SD-15 applies PID.
5. The self-priming peristaltic pump delivers the sample liquid from a container through a small diameter jet into the main chamber to avoid secondary pollution.. To make sure the process conducted steady and smoothly, magnetic agitator is optional to make the solution well mixed.
6. Narrow size distribution of particles. (10-100um)
7. Automatic de-blocking device prevents the nozzle from becoming blocked and variably controlled



TECHNICAL INFORMATION

Parameter	SD-18 Spray Dryer for water-based solvent (Upgraded model SD-1800A with inert loop for organic solvent)
Power	5500W
Voltage	220V,50/60 Hz
Atomizer material	SUS 316 Stainless steel
Evaporating Capacity	4 l/h for water
Airflow	0-330 m³/h
max. Input temperature	350 °C
Heater power	5000W
Temperature precision	±1 °C
Spray gas	4.2m³/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	5-100µm

Mean Residence time	1.0-1.5 sec
Operation mode	Automatic/Manual
Max. Sample feed	5000ml/hr
Minimum sample volume	100ml
Spray chamber material	SUS 304 stainless steel
Cyclone separator material	SUS 304 stainless steel
Receiving tank material	SUS 304 stainless steel
Body material	SUS304 Stainless steel
Seal of cyclone/cylinder	Silicone
Deblocking	Automatic
Sound	<60db
Dimensions	950*750*1700
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
Inert loop (for organic solvents)	Optional (SD-1800A)

000 «Диаэм»
Москва

ул. Магаданская, д. 7, к. 3 ■ тел./факс: (495) 745-0508 ■ sales@dia-m.ru

www.dia-m.ru
С.-Петербург
 +7 (812) 372-6040
 spb@dia-m.ru

Новосибирск
 +7(383) 328-0048
 nsk@dia-m.ru

Воронеж
 +7 (473) 232-4412
 vrn@dia-m.ru

Йошкар-Ола
 +7 (927) 880-3676
 nba@dia-m.ru

Красноярск
 +7(923) 303-0152
 krsk@dia-m.ru

Казань
 +7(843) 210-2080
 kazan@dia-m.ru

Ростов-на-Дону
 +7 (863) 303-5500
 rnd@dia-m.ru

Екатеринбург
 +7 (912) 658-7606
 ekb@dia-m.ru

Кемерово
 +7 (923) 158-6753
 kemerovo@dia-m.ru

Армения
 +7 (094) 01-0173
 armenia@dia-m.ru
