

# SD-6000 SERIES LAB SMALL SPRAY DRYER



## DESCRIPTION

Miniature experimental micro spray dryer(spray dryer / spray dryer) and its main application in the laboratories of universities, research institutes and food pharmaceutical and chemical enterprises to produce micro particle powder, which is widely applicable to all solutions such as emulsions and suspensions, and is suitable for drying of heat sensitive substances, such as biological products, biological pesticides, enzyme preparations, etc. The material is heated only when it is sprayed into foggy particles, so it is only instantaneously heated to keep the active ingredients of these materials intact after drying.




## MAIN CHARACTERISTIC

- Color LCD touch screen parameter display: air inlet temperature / air outlet temperature / peristaltic pump speed / air volume / pass needle frequency.
- Fully automatic control: One-click start-up, after setting spraying process parameters, the temperature reaches a predetermined temperature, the peristaltic pump starts automatically, the running animation is displayed on the touch screen, and the running process is clearly displayed; when the machine is shut down, just press the stop button, and the machine will automatically shut down safely.
- Manual control: If the process parameters need to be adjusted during the experiment, it can be easily switched to the manual state. The color touch screen is dynamically displayed (animated) throughout the experiment
- Equipped with nozzle cleaner (through needle), when the nozzle is blocked, it will be automatically cleared, and the frequency of through needle can be adjusted automatically.
- Shutdown protection function: Just press the stop button when shutting down, the machine will stop running immediately except the fan, to ensure that the equipment will not burn out due to misoperation (forced shutdown of the fan).
- The spraying, drying and collecting system is made of transparent high-quality high-borosilicate heat-resistant glass material, so that the drying process is performed in a pollution-free environment.
- Built-in imported oil-free air compressor, the particle diameter of the powder spray is normally distributed, the fluidity is very good, and the noise is very low, less than 60db.
- The atomizing structure of the two-fluid spray, the whole machine is made of high-quality stainless steel, and the design is compact without the need for auxiliary equipment.
- The design of drying temperature control uses real-time control PID constant temperature control technology to make the temperature control in the whole temperature area accurate, and the heating temperature control accuracy is  $\pm 1^{\circ}\text{C}$ .
- In order to maintain the purity of the sample, an air inlet filter is equipped.

- The feed volume can be adjusted by the feed peristaltic pump, and the minimum sample volume can reach 50ml.
- The particle size of the finished dry powder is relatively uniform, and more than 95% of the dry powder is in the same particle size range.
- For viscous materials, a nozzle cleaner (through needle) is provided. When the nozzle is blocked, it will be automatically cleared and the frequency of the through needle can be adjusted automatically.
- Innovative tower wall purging device, higher material recovery rate.



#### TECHNICAL PARAMETERS

MODEL	SD-6000G	SD-6000S	SD-6000N
Oil-free air compressor	Built-in	Built-in	Built-in
Picture			
Bag filter	N/A	N/A	Included
Glassware material	High borosilicate glass	Stainless steel	High borosilicate glass
Nozzle material	Stainless steel	Stainless steel	Stainless steel
External material	Stainless steel	Stainless steel	Stainless steel
Water evaporation	1500ml/h	1500ml/h	1500ml/h
Max sample feed rate	2000ml/h	2000ml/h	2000ml/h
Minimum feed quantity	50ml	50ml	50ml
Drying chamber diameter (mm)	Φ300	Φ300	Φ300
Nozzle type	Two-fluid	Two-fluid	Two-fluid
Nozzle size	1.0mm (Can be chosen from 0.5mm/ 0.7mm/ 0.75mm/ 1.0mm/ 1.5mm/ 2.0mm)		
Maximum inlet temperature	~250 C (adjustable)	~250 C (adjustable)	~250 C (adjustable)
Max. outlet temperature	140°C	140°C	140°C
Temperature control	PID/±1°C	PID/±1°C	PID/±1°C
Operation mode	Auto + Manual	Auto + Manual	Auto + Manual
Display	7" Touch LCD Display inlet temp., outlet temp., de-block frequency, inlet air volume, feed rate		

Particle making size	1~25um	1~25um	1~25um
Dry time	1.0 ~ 1.5s	1.0 ~ 1.5s	1.0 ~ 1.5s
Hot air condition	Air supply	Air supply	Suction
Heater capacity	3kw	3kw	3kw
Blower [power (kw), air volume (m /min)]	[0.25, 9.5]	[0.25, 9.5]	[0.25, 9.5]
Air compressor power (kw)	0.58kw	0.58kw	0.58kw
Max. Air inlet volume (L /min)	108L/min	108L/min	108L/min
Air compressor work pressure	2-5 bar	2-5 bar	2-5 bar
Electric power (kw)	4kw	4kw	4kw
Outline size (mm) (l×w×h)	800×600×1300	800×600×1300	900×600×1300
Installation weight	90kg	90kg	100kg
Power supply	220V/50Hz		220V/50Hz

## OPTIONAL

NO.	ITEM NAME
SD6001	Extra nozzle can be chosen from 0.5mm/ 0.7mm/ 0.75mm/ 1.0mm/ 1.5mm/ 2.0mm
SD6002	Bag filter device
SD6003	Inert loop system (for process flammable or explosion type material)
SD6004	Extra set of glassware or single glassware for backup use

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