

Spray Dryers | Standard

ADL312SC-A

Evaporated water capacity 1500mL/h

Temp. adjustment range 0~240°C

Liquid sending pump flow rate range 0~26mL/min

Nozzle options For liquids-air

New intelligent spray dryer with multiple functions and easy operation.



Features

- Adopting the method of instantaneously heating particle samples even if the samples with poor thermal stability are not easily oxidized, and get the uniform fine powder.
- The micro-powder after spraying has low moisture content, will not be oxidized, and no pollution.
- Products are directly dried into fine powder from solution or suspension samples without the need for filtration, separation, grinding, and other pre-processing and post-processing operations associated with traditional drying methods, avoiding contamination.
- It can be connected to the GAS510C organic solvent recovery device to handle samples containing organic solvents.
- The drying chamber and cyclone use a quick assembly and disassembly structure, further improving operability. A standard lift platform is equipped for installing and removing accessories.
- The device is equipped with a power socket for stirrers (200-230V~1A), convenient for stirring the suspension while sampling.
- Use a unique peristaltic sampling pump, nozzle cooling mechanism, pulse nozzle cleaning mechanism, anti-blockage needle, etc., to achieve diversity and stability in spray conditions.

Specifications

Model	ADL312SC-A	
Applicable samples	Water-soluble & organic solvent when connected to an organic solvent recovery device (GAS510C)	
Performance	Moisture evaporation capacity	Max. 1500mL/h
	Temp. regulator setting range	0~240°C (inlet temperature), 0~100°C (outlet temperature)
	Temp. adjusting accuracy	±1°C
	Drying air volume adjustment range	0.12~0.7 m ³ /min
	Spray air flow adjustment range	0~30L/min
	Spray pressure usage range	0.3~0.6MPa
Composition	Nozzle cleaning function	Manual pulse air cleaning from the nozzle front end
	External output	Inlet temperature, outlet temperature output (4~20mA)
	Temp. regulator	Multi-PID control
	Touch screen	Temperature adjustment, blower, heater, liquid feed pump, pulse air switch, automatic needle cleaning, alarm display, operation curve
	Control switch	Selectable inlet temperature or outlet temperature control
	Temp. sensor	PT100 thermistor
	Heater	3.2kW
	Liquid feed pump	Duct type liquid feed pump
	Spray air pump	Spray air compressor(sold separately) or built-in air compressor of organic solvent recovery device GAS510C (sold separately)
	Service socket	For stirrers: 200-230V~1A
	Suction blower	Brushless blower
	Filters	Suction filter, exhaust filter
	Solvent recovery	Use a solvent recovery device GAS510C (sold separately)
	Spray nozzle cooling structure	Joints×2, OD Φ10.5mm(connected to a chiller)
Spray air connection	Joint outer diameter, Φ7mm	
Exhaust connection caliber	Φ50mm	
Safety functions	Inlet, outlet temperature overheating, liquid feed pump reverse function, overcurrent leakage protection switch, nozzle connection abnormality (when connected to GAS510C)	
Specifications	External dimensions	W580×D420×H1355mm (stand included)
	Weight	Approx. 96kg
	Power supply	200-230V~50/60Hz 17-20A
Accessories	Liquid feed hose×2, exhaust hose (with 1 hose clamp) ×1, exhaust conversion joint, outlet temperature sensor, fuse, anti-static connection wire, intake hose 5m (with 2 hose clamps), stand components, protective cover (COV20), GF301C glass assembly, exhaust joint, air tube A, air tube B, product warranty, instruction manual	

Control panel



- Brand new 7-inch ultra-large touch screen control panel, available in Chinese/Japanese/English, easy and convenient to operate.
- High-power heater greatly enhance the time to reach temperature and the temperature setting range is wider to meet more sample experiments.
- It can switch between two hot air circulation systems: hot air inhalation type and ejection type.
- Both two-fluid nozzles and three-fluid nozzles can be used.
- A new automatic nozzle with a cooling mechanism.
- Remote control is possible (optional).
- Experimental data recording and storage can be realized (optional).

1 Sterilizers

2 Granulation and Spray Dryers

3 Furnaces

4 Ovens

5 Incubators

6 Plasma Equipment

7 Water Purifiers

8 Baths

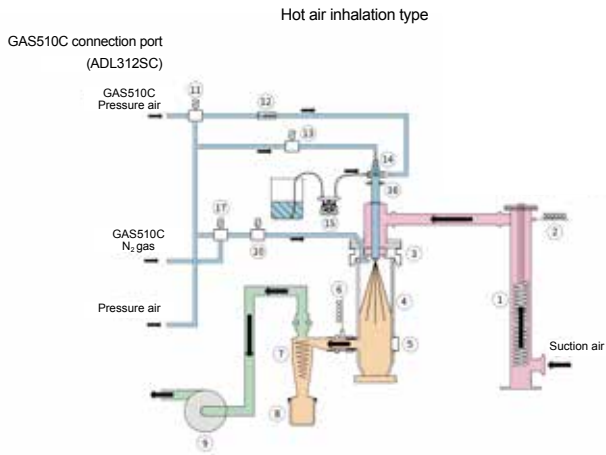
9 Water Circulators

10 Rotary Evaporators

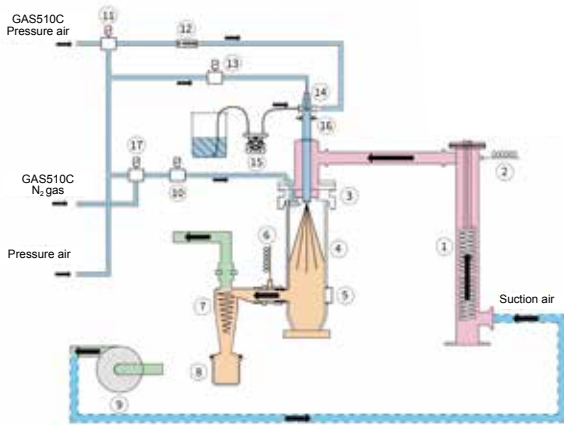
11 Stirrers & Shakers

12 Options

System diagram



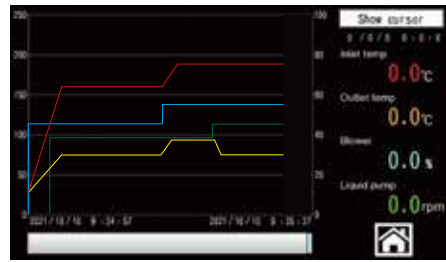
Hot air inhalation type



Hot air ejection type

No.	Part name	No.	Part name
1	Heater	10	Solenoid valve
2	Inlet temperature sensor	11	Three-way solenoid valve
3	Distributor	12	Flow meter
4	Drying chamber	13	Solenoid valve
5	Cap	14	Spray nozzle
6	Outlet temperature sensor	15	Liquid sending pump
7	Cyclone	16	Nozzle cooling connector
8	Product collecting container	17	Three-way solenoid valve of pulse jet gas source switchover
9	Blower		

Operation



Hot air ejection type connection pipeline



Setting example



Spray dryer ADL312SC-A + organic solvent recovery device GAS510C

- Sterilizers 1
- Granulation and Spray Dryers 2
- Furnaces 3
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- Plasma Equipment 6
- Water Purifiers 7
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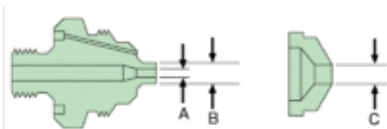
Spray nozzle



The top part of the spray consists of a liquid nozzle and an air nozzle.

Fluid nozzle (F)

Air nozzle (A)



Code	Nozzle size		Nozzle specifications	Applicable models
	Fluid cap	Air cap		
A080999031	PF2850-SS	Aperture A=0.711mm Aperture B=1.270mm	3	ADL312SC/GB211C/DL411C/DL410 (Standard) ADL311(S)/GB210
A080999040	PA64-SS	Aperture C=1.626mm		
A080999031	PF2850-SS	Aperture A=0.711mm Aperture B=1.270mm	2	ADL311(S)/ADL312SC/GB210/ GB211C/DL410/DL411C
A080999029	PA-70-SS	Aperture C=1.778mm		
A080999034	PF40100-SS	Aperture A=1.016mm Aperture B=2.540mm	6	ADL312SC/GB211C/DL410/DL411C
A080999035	PA120-SS	Aperture C=3.048mm		
A080999049	PF60100-SS	Aperture A=1.524mm Aperture B=2.540mm	4	ADL312SC/GB211C/DL410/DL411C
A080999035	PA120-SS	Aperture C=3.048mm		