

Spray Dryers | Standard

ADL312SC-A

Evaporated water capacity 1500ml/h

Temp. adjustment range 40~240°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 GAS411C 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 (can be used when connected to an organic solvent recovery device)	
Performance	Moisture evaporation capacity	Max. 1500ml/h
	Temp. regulator setting range	0~240°C (inlet temperature), 0~100°C (outlet temperature)
	Temp. adjusting accuracy	Inlet temperature $\pm 1^\circ\text{C}$
	Drying air volume adjustment range	0.2~0.9 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, 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	Use spray air compressor (sold separately) or connect to an organic solvent recovery device (sold separately) when using built-in air compressor
	Service socket	For stirrers: 200-230V~1A
	Suction blower	Tubular blower
	Filters	Suction filter, exhaust filter
	Solvent recovery	Use a solvent recovery device (sold separately)
	Spray nozzle cooling structure	Joints $\times 2$, outer diameter $\Phi 10.5\text{mm}$ (optional cooling water circulation device CF312L-B)
	Spray air connection	Joint outer diameter, $\Phi 7\text{mm}$
Exhaust connection caliber	$\Phi 50\text{mm}$	
Safety functions	Inlet, outlet temperature overheating, liquid feed pump reverse function, overcurrent leakage protection switch, nozzle connection abnormality	
Specifications	External dimensions	W580×D420×H1355mm
	Weight	Approx. 96kg
	Power supply	200-230V~50/60Hz 17-20A
Accessories	Liquid feed hose $\times 2$, exhaust hose (with 1 hose clamp) $\times 1$, 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, user manual	

Control panel

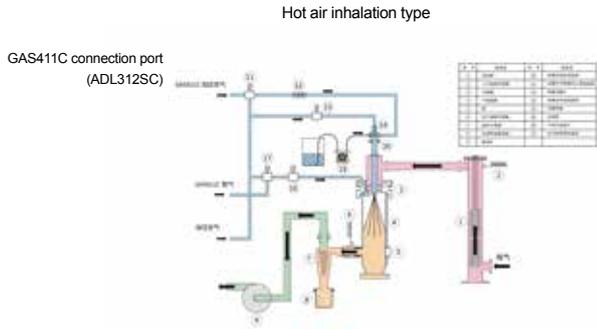


- Brand new 7-inch ultra-large touch screen control panel, available in Chinese/Japanese/English, easy and convenient to operate.
- High-power heaters greatly enhance the time to reach temperature and the temperature setting range is wider to meet more sample experiments.
- It can switch between two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

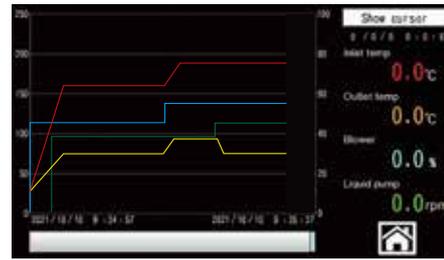
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- 8 Baths
- 9 Water Circulators
- 10 Rotary Evaporators
- 11 Freeze Dryers & Cold Traps
- 12 Stirrers & Shakers
- 13 Washers
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CE Certification

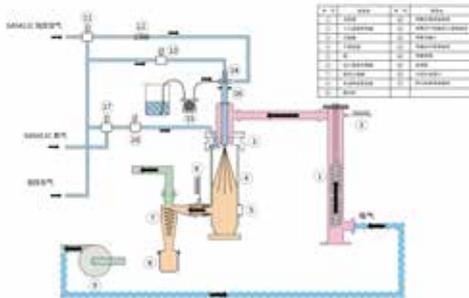
System diagram



Operation



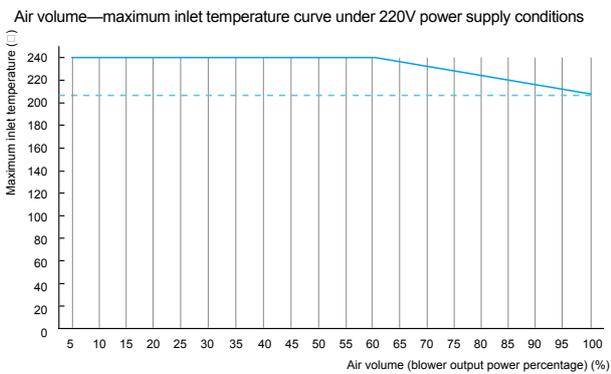
Hot air ejection type



Hot air ejection type connection pipeline



Relationship between blower output power and maximum inlet temperature (reference)



Setting example



Spray dryer ADL312SC+ organic solvent recovery device GAS411C

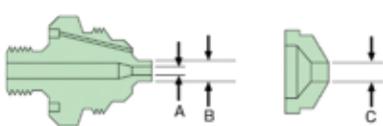
Spray nozzle



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

Liquid nozzle (F)

Air nozzle (A)



Code	Nozzle size		Nozzle specifications	Applicable models
	Liquid cap	Aperture		
281298	PF2050-SS	Aperture A=0.508mm Aperture B=1.270mm	1	ADL311(S)/GB210-A
	Air cap PA64-SS	Aperture C=1.626mm		
	PF2050-SS	Aperture A=0.508mm Aperture B=1.270mm		
281290	PF2050-SS	Aperture A=0.508mm Aperture B=1.270mm	2A	ADL311(S)/GB210-A
	Air cap PA70-SS	Aperture C=1.778mm		
281292	Liquid cap PF2850-SS	Aperture A=711µm Aperture B=1270µm	3	ADL312SC/GB211C/DL411C/DL410 (standard) ADL311(S)/GB210-A
	Air cap PA64-SS	Aperture C=1626µm		
281291	Liquid cap PF2850-SS	Aperture A=711µm Aperture B=1270µm	2	ADL311(S)/ADL312SC/GB210-A/ GB211C/DL410/DL411C
	Air cap PA-70-SS	Aperture C=1778µm		

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