

Spray Dryer

CE Certification 

ADL312SC

Water evaporation	Max. 1,500mL/h	Temp. adjustment range	40~220°C(Inlet) 0~100°C(Outlet)	Spray air flow adjustment range	0~30L/min	Spray nozzle (selectable)	Tow-way nozzle	Power supply	AC 200~230V
Display language	Japanese, English, Chinese								

The new intelligent spray dryer with rich functions and easy operation.

Features

- Instantaneous heating of the microparticle sample ensures that even heat-stable samples are not oxidized and that a uniform fine powder is obtained.
- The sprayed micro-powders are low in moisture, non-oxidizing and non-contaminating.
- The product is dried directly from the solution or suspension sample into a fine powder without the pre-treatment and post-treatment operations of filtration, separation, and grinding associated with conventional drying methods, and eliminates the contamination problems caused by these operations.
- It can be connected to the GAS411C organic solvent recovery unit to handle organic solvents.
- The drying chamber, cyclone, etc. are of quick-assembly construction, further enhancing operability.
- A lifting platform is provided as standard for attaching and detaching accessories.
- The machine is equipped with an outlet for stirrer power (2A) to facilitate stirring of suspensions while feeding samples.
- The unique peristaltic feed pump, nozzle cooling mechanism, pulsed nozzle cleaning mechanism, and anti-clogging stabbing needle provide a wide variety of spray conditions and stability.

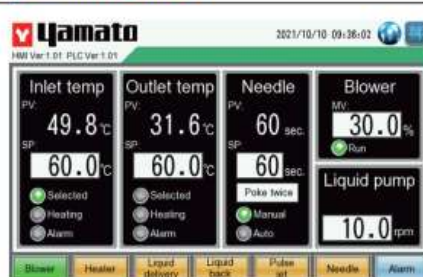


Specifications

Model	ADL312SC
Corresponding sample	Water soluble & organic solvents (when GAS411C is connected)
Water evaporation	Max. 1,500mL/h
Temperature adjustment range	40~240°C (Inlet temp.), 0~100°C (Outlet temp.)
Temperature accuracy	±1°C
Adjusting range for drying air	0~1.0m³/min
Spray air flow adjustment range	0~30L/min
Nozzle air pressure adjustment range	0~0.6MPa (Adjustable)

Nozzle washing function	Auto clean out needle, pulse jet cleaning
Temperature output	Inlet temp., Outlet temp. (4~20mA)
Temperature control	Multi-stage PID control
Touch screen	PID digital temperature adjusting device
Touch panel	Temperature adjustment, blower, heater, liquid feed pump, switch for pulse jet, automatic needle poking, alarm display, operation
Control select switch	Select inlet temperature, outlet temperature control switching
Temperature sensor	PT100
Heater	3.2KW
Sample feed pump	One touch pedestal type
Spraying from Nozzle	Use air compressor for spraying (sold separately) or use GAS411C built-in compressor (N ₂) when connected to organic solvent recovery device GAS411C (sold separately)
Service outlet	For stiller etc.: AC220V, 2A
Blower	Tube blowers (Can be switched to suction or push-out)
Filter	Suction filter, exhaust filter
Solvent recovery	Use of solvent recovery unit GAS411C (sold separately)
Spray nozzle cooling structure	Fitting×2, outer diameter φ10.5mm (optional cooling water circulation device CF312L-B)
Air connection for spraying	Outside diameter of connector, φ7mm
Spraying air pressure	0.3MPa
Exhaust connection	Diameter φ50mm
Safety function	Inlet and outlet temperature overheating, pump reversal function, Overcurrent leakage protection switch, Nozzle connection abnormality (when connected to GAS411C)
External dimensions	W580×D420×H1,150mm
Weight	80kg
Power supply	AC200~230V 50/60Hz, 16~18A
Accessories	2 fluid supply hoses, 1 exhaust hose (with 1 hose tie), Exhaust adapter, Outlet temperature sensor, Fuse (250V 2A), De-static cable, Inlet hose 5m (with 2 hose ties), Nozzle adapter bushing, Stand assembly, Protective cover (COV20)
Option device	GWS410 (exhaust gas cleaning equipment), External filter, Dehumidification equipment, USB data storage, Various nozzle sizes

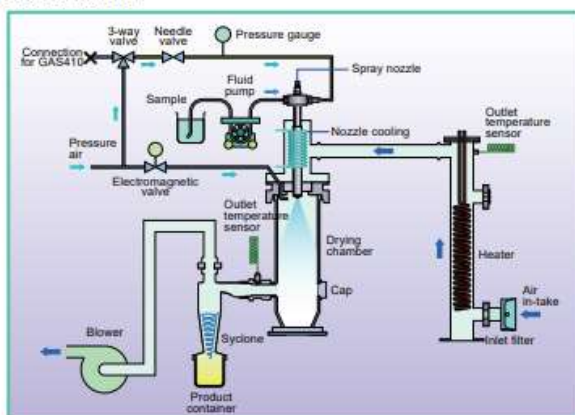
Operation Screen



- The new 7" large touch screen control panel is available in Chinese/Japanese/English for easy and convenient operation.
- High power heater greatly improves the temperature arrival time, and the temperature setting range is wider to meet more sample experiments.
- Switchable hot-air intake and push-out hot-air circulation systems.
- Both two-fluid and three-fluid nozzles are available.
- New automatic nozzle with cooling mechanism (optional).
- Remote control is available.
- Experimental data can be recorded and stored. (optional)

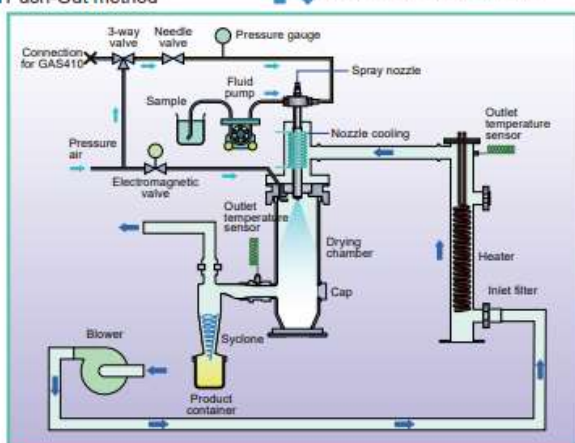
System Diagram

Suction method



Push-Out method

Method can easy to change



Fluid Nozzle

New 2
Fluid Nozzle



New 3
Fluid Nozzle
(Option)



Setting Example

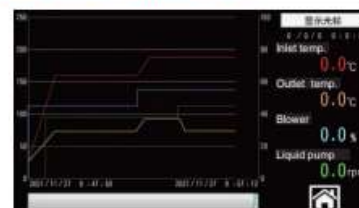


ADL312SC+GAS411C
Organic solvent recovery unit system

Hot air Push or Suction connection line (Easy can change)



Operation Curve Data



Spraying Nozzle

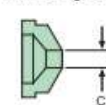
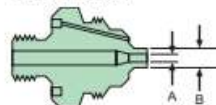


The tip of the nozzle comprises of a nozzle for liquid and a nozzle for gas.

Two-way nozzle system

Nozzle for liquid(F)

Nozzle for gas(A)



Product code	Model	Nozzle No.	Size (μm)
281297	1A	(F) 1650	A 406 B 1270
		(A) 64	C 1626
281298	1	(F) 2050	A 508 B 1270
		(A) 64	C 1626
281290	2A	(F) 2050	A 508 B 1270
		(A) 70	C 1778
281291	2	(F) 2850	A 711 B 1270
		(A) 70	C 1778
281292	3 (Standard)	(F) 2850	A 711 B 1270
		(A) 64	C 1626

External Filter Unit (Option)

with air blow mechanism



- When installed in the exhaust, it can effectively filter the sample body that is not fully recovered, and achieve the secondary recovery purpose.
- When installed in the air inlet, it can effectively filter.
- When installed in the air inlet, it can effectively filter the impurity particles in the inhaled air to prevent contamination of the sprayed sample.