

Overview

The DL-410 is a larger capacity spray dryer that also does not require the liquid sample or solution to undergo any pre or post-processes such as filtration, separation, or pulverization. The use of organic solvents is fully supported with the attachment of our GAS-410 organic solvent recovery unit. Small, expensive and/or heat sensitive samples can be dried quickly and efficiently with this easy to operate system.



Water Evaporation:	
	<i>Max.3000 ml/h</i>
Operating Temperature Range:	
	<i>40°C to 300°C</i>
Liquid Sample Flux:	
	<i>up to 80 ml/min</i>
Spray Nozzle:	
	<i>Dual Fluid Nozzle</i>

Advantages

- Processes samples as small as 0.5g of solid matter
- Safe for heat-sensitive samples, such as food or medical products
- No risk of contamination
- Detachable drying chamber, cyclone and product vessel
- Fast and easy clean up
- Universal power supply and multilingual touch screen controller
- Digital display of inlet / outlet temperature and drying air volume increases readability

Easy operation and maintenance

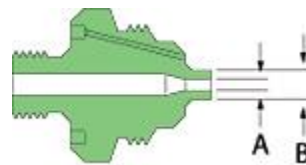
- The hot air inlet and drying chamber cover automatically move up and down, and since the cyclone and product
- Vessel can easily be removed, cleaning and maintenance after your experiment is easy.
- Control functions are conveniently arranged on the control panel for various conditions. The temperature recorder, air flow meter, pressure gauge and other measurements allow easy control of experiment conditions.



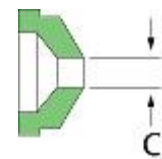
Control Panel

Model	2A	2	3	4	5
Nozzle No.	2050	2850	2850	60100	100150
(F)	A	508	711	1530	2550
	B	1270	1270	2550	3825
Nozzle No.	70	70	64.5	120	130
(A)	C	1778	1778	1638	4530

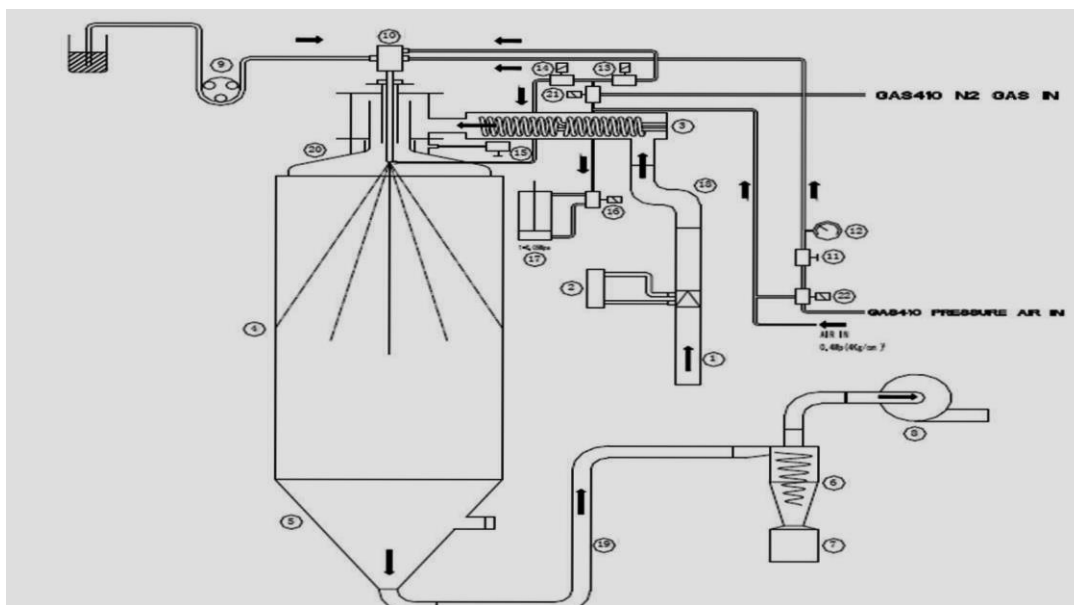
Spraying Nozzle Nozzle size



Liquid nozzle (F)



Air nozzle (A)



<input type="checkbox"/> Mesh tube	<input type="checkbox"/> Liquid delivery pump	⑰ Air tank
<input type="checkbox"/> Dry air flow meter	<input type="checkbox"/> Spray nozzle	⑱ Connecting tube
<input type="checkbox"/> Heater	⑪ Spray air needle valve	⑲ Connecting hose
<input type="checkbox"/> Drying chamber	⑫ Spray air pressure gauge	⑳ Upper chamber
<input type="checkbox"/> Lower chamber	⑬ NEEDLE KNOCKER for magnetic valve	㉑ Conversion solenoid valve
<input type="checkbox"/> Cyclone	⑭ nozzle, Blower use magnetic valve	㉒ Conversion solenoid valve
<input type="checkbox"/> product catcher	⑮ Cold wind adjusting valve (Manual valve)	
<input type="checkbox"/> Blower	⑯ use magnetic valve for Head lifting and descending	

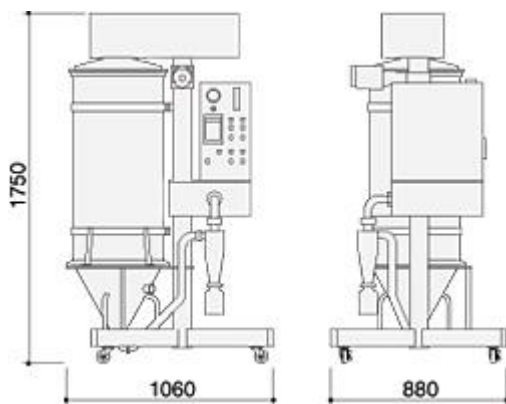
System Diagram

Specifications

Performance	Water Evaporation Rate	Max. approx. 3,000 ml/h
	Temperature Control Range	40°C - 300°C at inlet
	Temperature Control Accuracy	± 1°C at inlet
	Dry Air Flow Rate	Max. 1.2 m ³ /min
	Air Spray Pressure Control Range	0 - 600 k Pa (0-6 kg/cm ²)
	Flow Rate for Sample Liquid Feed Pump	Max. 80 ml/min
Structure	Temperature Controller	PID digital temperature controller
	Temperature Sensor	K thermocouple
	Stainless Tube Heater	2kW + 2kW at 240V
	Sample Liquid Feeding Pump	Quantitative peristaltic pump
	Solvent Recovering Capability	Organic solvent recovery unit GAS-410 must be used
	Spray Line Cleaning	Needle inside the nozzle to clean the mesh automatically
	Safety Devices	Self-diagnostic functions (e.g. temperature aberration); Sample feed reversal
Standard	Air Spray Pressure Gauge	Bourdon tube: 600k Pa (6 kg/cm ²)
	External Dimensions (W x D x H)	1750 x 1060 x 880 mm or 69 x 42 x 35 in
	Weight	180 kg or 397 lbs
	Power Supply	AC 200V - 240V, single-phase 24 A
Included Accessories	Sample liquid tube	Silicone tube - 2 pcs
	Safety Cover	Yes
	Air hose	1 pc
	Exhaust Duct	1 pc

Required Accessories	Mini Spray Attachment	N/A
Optional Accessories	Organic Solvent Recovery Unit	GAS - 410
	Inlet/outlet Temperature Recorder	212792 - factory installed
	Fine Powder Recovery Cyclone	N/A
	Viton/Tiron Feeding Tube	Please inquire
	Nozzle	3, 4, 5
Operational Requirements	Compressed Air	28 l/min air volume and 8kgf/cm ² compressed air is required
	Type of Gas	N ₂ gas (99.99% purity, medical grade) is required when using GAS-410

Dimensions (Unit:mm)



Our company N-Wissen is the exclusive partner of Yamato Scientific for Europe and has the service and training for Europe. We provide our customers with our expertise in the fields of application and service:

- ✚ User and application training
- ✚ Installation and start-up of devices in the customer's laboratory is carried out by our certified Engineer
- ✚ IQ / OQ procedures
- ✚ We provide the full warranty and post-warranty service of our products
- ✚ Preventive Maintenance Contracts and Re-Validation
- ✚ Excellent Support and fast delivery of consumables and spare parts (available in stock)