Spray Dryers | Powder Granulating, Drying, Mixing

GB211C-B

Evaporated water capacity	1500ml/h	Temp. adjustment range	40~240℃	Liquid sending pump flow rate range	0~26ml/min

Spray dryer for powder granulation and drying of wet powders, one machine with multi-purpose, save more space.

Features

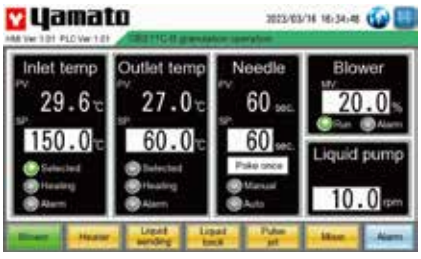
This device uses a fluidized bed for powder granulation and drying of wet powders. It is a fluidized bed drying and granulating device formed by combining the main unit GB211C with accessory GF200.
The drying chamber is made of ultra-hard glass, allowing observation of the fluidized bed state and spray state. Additionally, it is very convenient for data verification of flow meters, spray pressure gauges, inlet temperature, and outlet temperature. After purchasing the GF301 spray attachment, it can spray as well as fluidized bed granulate, providing strong expandability. It serves multiple purposes, accommodating various experimental objectives, effectively saving laboratory space, and avoiding multiple purchases, thus saving costs.

- 7-inch ultra-large touch screen with options for Chinese/Japanese/English, easy and convenient to operate.
- Automatic lifting function facilitates the installation and removal of the drying chamber.
- Experimental data recording and storage can be realized (optional function).
- Remote control is possible (optional function).
- Temperature zoning control is adopted, heating up faster and more stable.
- High-power heater significantly reduces temperature reaching time and offers the wider temperature setting range, meeting more sample experiments.
- Widely used in the R&D of food, pharmaceuticals, and new materials, as well as sample coating.

Specifications

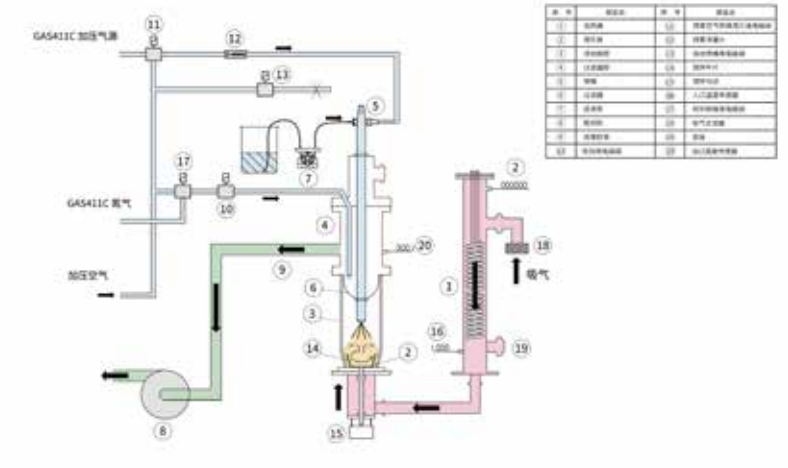
Model		GB211C-B
Performance	Moisture evaporation capacity	Max. 1500ml/h
	Temperature regulator setting range	0~240℃ (inlet temperature), 0~100℃ (outlet temperature)
	Temp. adjusting accuracy	Inlet temperature ±1℃
	Drying air volume adjustment range	0.2~0.9 m^3/min
	Spray air flow adjustment range	0~30L/min
	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)
	Temperature regulator	Multi-PID control
	Touch screen	Temperature adjustment, blower, heater, liquid feed pump, pulse jet switch, automatic needle insertion, alarm display, operation curve
	Control switch	Inlet temperature, outlet temperature control switch
	Temperature sensor	PT100 thermistor
	Heater	3.2KW
	Liquid feed pump	Duct type liquid feed pump
	Spray air pump	Use spray air compressor (sold separately)
	Service socket	For stirrer: 200-230V~1A
	Suction blower	Tubular blower
	Filters	Suction filter, exhaust filter
	Spray nozzle cooling structure	It can connect to CF312L-B: joints ×2, outer diameter Φ10.5mm (sold separately)
	Spray air connection	Joint outer diameter, Φ7mm
	Exhaust connection caliber	Φ50mm
Safety functions		Overheating at inlet and outlet temperatures, liquid feed pump reverse function, overcurrent and leakage protection switch, abnormal nozzle connection (when connecting to GAS411C)
Specifications	External dimensions	W760×D420×H1350mm
	Weight	Approx. 110kg
	Power supply (50/60Hz) rated current	200-230V~ 50/60Hz 17-21A
Accessories		2 liquid feed hoses, 1 exhaust hose (with 1 hose tie), exhaust conversion joint, outlet temperature sensor, fuse (250V 2A), antistatic connection cable, 5m intake hose (with 2 hose ties), nozzle conversion sleeve, stand assembly, protective cover (COV30), GF200 glass components

Control panel



CE Certification

System diagram



Application

- Granulation, drying, mixing of powders
- Pharmaceuticals, food, catalysts, fuels, detergents, ceramics, etc.
- Since it is suitable for about 50~300g samples, it is most suitable for high-value samples or research-level experiments

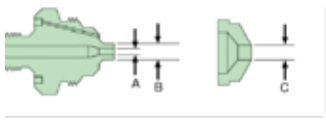
Operability

The disassembly or cleaning of the drying chamber, cyclone, and product collection container adopts a quick plug-in method, which is very convenient.

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 specifi-cations	Applicable models
281297	Liquid cap PF1650-SS	Aperture A = 406μm Aperture B = 1270μm	1A	ADL311(S)/GB210-A/GB210-B(standard)
	Air cap PA64-SS	Aperture C=1626μm		
281298	Liquid cap PF2050~SS	Aperture A = 508μm Aperture B = 1270μm	1	ADL311(S)/GB210-A
	Air cap PA64-SS	Aperture C=1626μm		
281290	Liquid cap PF2050~SS	Aperture A = 508μm Aperture B = 1270μm	2A	ADL311(S)/GB210-A
	Air cap PA70-SS	Aperture C=1778μm		
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		

Implementation case

No.	Sample			Adhesive			Measurement conditions						Results	
	Name	Par-ticle size	Weight	Name	Con-centra-tion %	Spray amount	Inlet temp. ℃	Liquid feed amount g/min	Spray pressure kg/cm²	Spray amount g/time	Spray times	Nozzle height cm	Average particle size	1400~125μm Recovery
1	Metatitanic acid -lead zirconate titanate	10	280	PVA	10	42	150	5	0.4	6	8	25	180	75
2	Sodium fluoride		200	PVA + EDTA	24	165	150	5	0.5	15	11	28	320	97
3	Diamond + metal powder		538	PVA	10	108	170	6	0.4	5	22	30	260	80
4	Pharmaceutical		200	Dextrin	5	171	150	5	0.5	8~10	21	27	310	85
5	Flavor		300	Dextrin	5	60	150	5	0.4	8	12	30	330	98
6	Lactose		200	Sorbitol	10	70	100	14	1.0	17	4	25	390	80