



QPG Air Stream Spray Dryer

Working principle

The heated clean air enters into the drying tower, in the drying tower, use two fluids (or three fluids) sprayer to atomize the water or solvent in the liquid into fine mist. The mist contacts hot air, and the water in material liquid will be evaporated immediately. The air will be exhausted by exhaust fan, and the product will be collected at the bottom of the drying tower and dust collector.

Product features

It is particularly applicable for the viscous, paste and paste-like materials, the performances are perfect, and it is not be replaceable by the other machines. A lot of varieties for trial machines, wide applications for low temperature drying. Simple spray structure, easy maintenance and low running cost.



Technical parameters

Specifications	QPG-5	QPG-25	QPG-50	QPG-100	QPG-150	QPG-200
Air Inlet temperature	140-550 ° C (depend on the product to be dried, and URS)					
Air exhaust temperature	60-120 ° C (depend on the product to be dried, and URS)					
Nominal water evaporation capacity (Kg / h)	5	25	50	100	150	200
Heating method	High-pressure steam, or steam + electricity, or any kinds of fuel (diesel, natural gas, liquefied petroleum gas or coal, etc.), or solid fuel (any combustible material). Please specify.					
Compressed air pressure (MPa)	0.4	0.6		0.7		
Compressed air consumption (m ³ /min)	0.9	0.9	1.1	1.5	2.7	3.4
Heat required (KCal/h)	1	5	10	20	30	40
Power of Fan (kw)	0.75	4	7.5	11	15	18.5
Yield of product	95-99.5%, depend on the properties of the product and configurations					
Specifications	QPG-500	QPG-1000	QPG-1500	QPG-2000	QPG-5000	QPG-10000
Inlet air temperature	140-550 ° C (depend on the product to be dried, and URS)					
Air exhaust temperature	60-120 ° C (depend on the product to be dried, and URS)					
Nominal amount of water evaporation (Kg/hour)	500	1000	1500	2000	5000	10000
Heating method	High-pressure steam, or steam + electricity, or any kinds of fuel (diesel, natural gas, liquefied petroleum gas or coal, etc.), or solid fuel (any combustible material). Please specify.					
Compressed air pressure (MPa)	0.7	0.7	0.7	0.7	0.7	0.7
Compressed air consumption (m ³ /min)	7.5	1.4	2.0	2.5	5.0	9.0
Calorie requirement (KCal/h)	100	200	300	400	500	1000
Fan power (kw)	45	90	125	160	380	700
Yield of product	95-99.5%, depend on the properties of the product and configurations					

QPG Air Stream Spray Dryer



Remark:

1. Nominal water evaporation capacity: It is calculated according to the inlet air temperature of 350° C, and the exhaust air temperature of 85-90° C.
2. Standard specification: The specifications listed above are named based on nominal water evaporation capacity.
3. Process specifications: For specific equipment, we normally name the equipment as per the specific processing parameters and requirements. For the products which heat sensitive temperature is more than 110° C, the process specifications is about the same with the standard specifications. For most food or the other products which heat sensitive temperature is normally low, the process specifications are about equivalent to 2-3 times of the standard specifications. Such as QPG2000 for drying food, the drying tower is about equivalent to the standard one of QPG4000 or of QPG6000 (vary as per the properties of the product). For the products with high heat sensitive temperature, the inlet air temperature could be up to 450° C or even higher, the process specification is smaller than the standard specifications. But the requirements of the drying tower and relative configurations should be higher if the air inlet temperature is more than 450° C
4. Product yield: We provide a variety of fines collection and product recovery devices as per customer requirements and product characteristics, so to ensure it meets customer requirements.
5. Test: We have the most advanced trial facilities in China to make trials for the customers, so to ensure that the equipment reaches the customer requirements in the contract.

. Ordering information:

1. Liquid material name and physical properties: solid contents (or moisture contents), viscosity, surface tension, PH value, etc. If there's any other liquid, such as organic solvent, please specify the name and percentage clearly.
2. Product characteristics: final moisture content required, the range of particle size, and heat sensitive temperature etc.
3. Special requirements (if any): range of specific bulk density, color, and flavor etc.
4. Working capacity (kg/h or ton/h). If the capacity is based on per day, per month or per, please also indicate the working hours.
5. Heat source: it could be the pressure of steam, electricity, coal, oil, natural gas, LPG and other combustible materials.
6. Control requirements: the way to control the air inlet temperature, liquid supply system, pneumatic hammer etc, and the type of the system control (normal push button type, PLC+HMI, and PC system etc)
7. Fines collection type: depending on the product characters and environment protection requirements, we have following options, cyclone, bag filter, wet scrubber and their combinations.
8. Other special requirements: dimensions of the workshop, height limit and special electricity requirements etc.

Note Customers might provide part of the above mentioned aspects. Other requirements, we should decide after making trials, or after technical discussion with the customer, or as per our experience