

CIMA[®]
Industries Inc.
Food and Beverage Equipment

SPRAY DRYING



*Innovating
drying process*

*Leading technology
for obtaining powders*



SPRAY DRYING

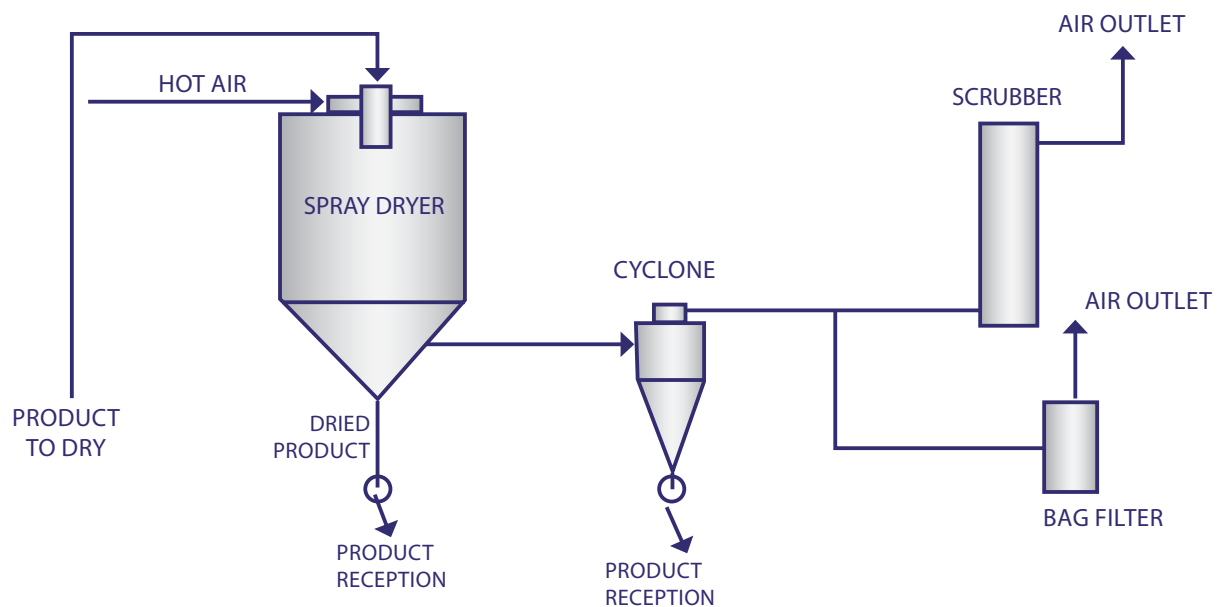


Spray drying is a technique widely used in the food, beverage and agroalimentary industries. This technology permits to obtain powder products starting from concentrated liquids. The operation principle is based on the atomization of a liquid into a spray of droplets, this droplets make contact with hot air (150°C to 300°C), evaporate and form pulverized particles. Finally the powder product is cooled and packaged.

BENEFITS:

- Food preservation.
- The product maintains the physical and chemical properties.

Spray Drying System



MAIN APPLICATIONS:

There exist a wide list of products that can be preserved by spray drying technology.

- Dairy products.
- Child's food.
- Coffee.
- Inulin.
- Ovoproducts.
- Plants extracts.
- Juices, fruits and vegetables extracts.
- Meat.
- Tea.
- Enzymes.
- Proteins.
- Botanical flavours.

EQUIPMENT

Standard Components and Specifications	LPG					
	5	25	50	100	150	200-20000
Feed Pump	Peristaltic pump	High pressure pump				
Inlet temperature (°C)	140-350 automatically controlled					
Outlet temperature (°C)	~80-90					
Max. evaporation capacity with 300 °C	5	25	50	100	150	200-20000
Centrifugal spraying nozzle transmission mode	Compressed air transmission	Mechanical transmission				
Rotation speed rpm *	25000	18000	18000	18000	15000	8000-15000
Spraying disc diameter (mm)	50	100	120	140	150	180-540
Heat Supply	Electricity	Electricity + Steam	Electricity + Steam, fuel oil and gas			According to user requirement
Max. Electric heating power kw	9	36	63	81	99	
Overall dimensions	1.8 x 0.93 x 2.2	3 x 2.7 x 4.26	3.7 x 3.2 x 5.1	4.6 x 4.2 x 6	5.5 x 4.5 x 7	Depends on user requirement
Powder solubility	≥ 95	≥ 95	≥ 95	≥ 95	≥ 95	≥ 95
Type of atomizer	Rotary - Co-current nozzle - Fountain nozzle					

*Subject to equipment model.

It not includes storage tanks, all the information is only for reference and is subject to changes.

ADVANTAGES OF SPRAY DRYING PROCESS

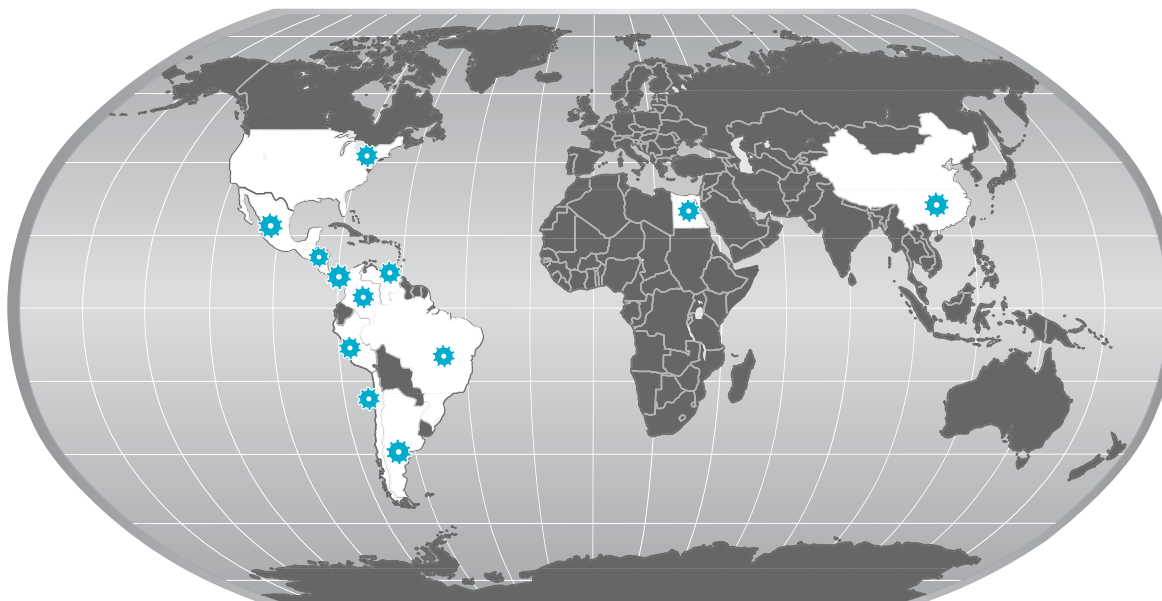
- Continuous and constantly controlled process.
- Homogenized product.
- Short drying times.
- Final product as a fluid and soluble powder with an excellent presentation.



Our group of professionals are qualified to give you the support to find the right solution in drying systems for your specific needs, granted a low inversion and operation cost. CIMA has the capacity to develop your Project from the idea, through installation and startup to technology transfer.



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