



## LPG系列高速离心喷雾干燥机

## LPG Series High-Speed Centrifugal Spray Dryer

### 概述

◆ 喷雾干燥是液体工艺成形和干燥工业中最广泛应用的工艺。最适用于从溶液、乳液、悬浮液和可泵性糊状液体原料中生成粉状、颗粒状产品。因此，当成品的颗粒大小分布、残留水份含量、堆积密度和颗粒形状必须符合精确的标准时，喷雾干燥是一道十分理想的工艺。

### Descriptions

◆ The spray drying is the technology widest used in the liquid technology shaping and in the drying industry. The drying technology is most suitable for producing the powder, particle products from the materials, such as: solution, emulsion, soliquoid and pumpable paste states. For this reason, when the particle size and distribution of the final products, their residual water contents, the stacking density and the particle shape must meet the precision standard, the spray drying is one of the most desired technologies.

### 原理

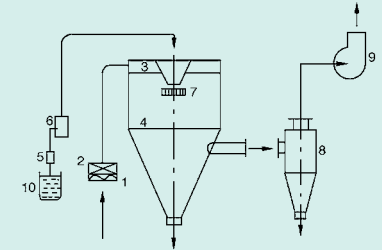
◆ 空气经过滤和加热，进入干燥器顶部空气分配器，热空气呈螺旋状均匀地进入干燥室。料液经塔体顶部的高速离心雾化器，（旋转）喷雾成极细微的雾状液珠，与热空气并流接触在极短的时间内可干燥为成品。成品连续地由干燥塔底部和旋风分离器中输出，废气由风机排空。

### Principle

◆ After the filtering and heating, the air enters into the air distributor on the top of the Dryer. The hot air enters into the drying room in the spiral form and uniformly. By passing through the high-speed centrifugal spray on the top of the tower, the material liquid will rotate and be sprayed into the extremely fine mist liquid beads. Through the very short time of contacting the heat air, the materials can be dried into the final products. The final products will be discharged continuously from the bottom of the drying tower and from the whirl separator. The waste gas will be discharged from blower.



流程示意图flow chart



- |         |                            |
|---------|----------------------------|
| 1.空气过滤器 | 1. air filter              |
| 2.加热器   | 2. heater                  |
| 3.热风分配器 | 3. hot air distributor     |
| 4.干燥室   | 4. drying room             |
| 5.过滤器   | 5. filter                  |
| 6.泵     | 6. pump                    |
| 7.喷头    | 7. atomizer                |
| 8.旋风分离器 | 8. cyclone separator       |
| 9.风机    | 9. blower                  |
| 10.料液槽  | 10. material liquid groove |





### 特点

- ◆ 干燥速度快，料液经雾化后表面积大大增加，在热风气流中，瞬间就可蒸发95%~98%的水份，完成干燥时间仅需数秒种，特别适用于热敏性物料的干燥。
- ◆ 产品具有良好的均匀度、流动性和溶解性，产品纯度高，质量好。
- ◆ 生产过程简化，操作控制方便。对于湿含量40~60%（特殊物料可达90%）的液体能一次干燥成粉粒产品，干燥后不需粉碎和筛选，减少生产工序，提高产品纯度。对产品粒径，松密度，水份，在一定范围内可通过改变操作条件进行调整，控制和管理都很方便。

### Features

- ◆ At a high speed of drying, after the spraying of the material liquid, the surface area of the material will be increased greatly. In the hot air flow, 95% ~98% of water can be evaporated at a moment. The time of completing the drying needs only several seconds.
- ◆ This is especially suitable for drying the heat sensitive materials. Its final products own the good uniformity, mobility, dissolving capacity. And the final products are high in their purity and good in their quality. The production procedures are simple and the operation and control are easy. The liquid with the moisture contents 40~60% (for special materials, the contents may reach 90%.) can be dried into the powder or particle products once a time. After the drying, there is no need for smashing and sorting, so as to reduce the operation procedures in the production and to enhance the product purity. The product particle diameters, looseness and water contents can be adjusted through changing the operation condition in a certain scope. It is very convenient to carry out the control and management.

### 技术参数 Technical Parameters

项目 item	参数 parameter	LPG					
		5	25	50	100	150	200-2000
入口温度°C inlet temperature		140-350 自控automatically controlled					
出口温度°C outlet temperature		~ 80-90					
水份最大蒸发量 kg/h Max. Water evaporation capacity		5	25	50	100	150	200-2000
离心喷雾头传动形式 Centrifugal spraying nozzle transmission mode		压缩空气传动 Compressed air transmission		机械传动 Mechanical transmission			
转速 (r.p.m) Rotation speed		25000	18000	18000	18000	15000	8000-15000
喷雾盘直径 (mm) Spraying disc diameter		50	120	120	120	150	180-340
热源 Heat supply		电 Electricity	电 Electricity	电+蒸汽、燃油、煤气 Electricity + steam, fuel oil and gas	电+蒸汽 Electricity + steam	电+蒸汽、燃油、煤气 Electricity + steam, fuel oil and gas	由用户自行解决 Settled by users themselves
电加热最大功率 kW Max. Electric heating power		8	31.5	60	81	99	
外形尺寸长×宽×高 (m) Overall dimensions		1.8x0.93x2.2	3x2.7x4.26	3.7x3.2x5.1	4.6x4.2x7	5.5x4.5x6	根据具体情况确定 Decided according to the concrete conditions
干粉回收率 % Dried powder restoring rate		≥95	≥95	≥95	≥95	≥95	≥95

