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# LAB 1 GLASS LABORATORY SPRAY DRYER

Capacity : 1 - 2 kg / hr water evaporation

**Used for spray drying, encapsulation and others; Designed for solvent and aqueous feeds; Visible process due to glass assembly; Easy to handle glassware  
High performance cyclone; High yields; Self contained and supplied complete and ready for immediate operation; Compact design and easy to move around; Fast drying process (up to 2 kg/hr); Shorter times to optimize formulations.**



#### Additional Features :

- Online nozzle cleaning with deblocker.
- 3-Fluid nozzle for spray immiscible fluids
- Inert loop for condensation of solvents and feed back of inert gases
- Integrated magnetic stirrer and hot plate
  - Fast setup and cleaning times
  - Lowest maintenance costs
- Requires only AC 220/240v 50/60Hz power supply (other power requirements available)

**Reproducible powder production at lab scale; Ideal for scale up to pilot or production;  
All units feature a simple and intuitive touch screen operation  
system with recipe functions and USB data logger.**



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### Consistent atomization



One of the reasons for the reproducibility of the Lab 1 Glass Laboratory Spray Dryer is the durable and precise nozzle technology. The nozzle comes with a de blocker needle which can be pushed through the nozzle in case of clogging. The de blocker frequency is user selectable. Optional, nozzle cooling is available. The nozzle can be cooled with regular tap water. Spraying of heat sensitive product is possible.

### Touch screen PLC operating system

The touch panel PLC operating system allows the user to control all the system parameters with the touch of a finger. The blower, air heater and feed liquid pump are operated from this panel. The system parameters such as inlet hot air temperature, outlet exhaust air temperature, feed and blower frequency are set by touching the corresponding displayed value and entering the new value in the set screen that appears.



A data trend screen shows a record of the air temperatures, heater output and feed liquid pump output during the experiment. The user can visually see the temperature record and quickly understand it. For data analysis, a daily report screen and experiment data can be viewed with option to save to a USB flash drive for use in a PC computer.

### Access to only two sides

Access to only two sides of the spray dryer is required for normal operation. The touch panel and product collection pot are located so that all operations are performed from one operating point.

