



Kilo-Lab Conical Vacuum Dryer-Mixer

Bolz-Summix has developed a new Kilo-Lab size Conical Vacuum Dryer-Mixer, the *BS-miniDRY®* for the smallest product amounts of 150 to 1500 milliliters.

Small – Modular - Flexible - Mobile

During research and development when only a few grams of a new substance are available, the existing equipment that was available to R&D Centers was just too big for these very small product amounts, reliable attempts or simulations of drying and mixing could not be properly carried out. Entirely new work and simulation possibilities become possible through the use of this new lab dryer-mixer during the development of the new products in the laboratory. Processes with small product amounts can be simulated in the early stages of the development in order to gain important findings for the practical conversion to the production standard as well as their optimization.

Technical requirements drawn upon from close cooperation with actual R&D Centers have combined with our in-house know-how in the design and construction of contact dryers-mixers, allowed us to develop this advanced lab machine. With a flexible filling-volume of 150 ml to 1500 ml, a great number of process conditions can be simulated.

One highlight is the optional available dual agitation system that opens the possibility for the lab dryer-mixer either to work as conical screw dryer or to be used also as a central shaft dryer. Innovative technical developments facilitate this unique variability of the new *BS-miniDRY®*. This gives unique possibilities to test the general applicability and to compare the lab results of different agitation system types directly with each other. The lab dryer is equipped with variable rotation speed for arm and screw, dust filter, manual sampler, CIP nozzles and a height adjustable carrying-frame.

This machine matches the special requirements in the lab with regard to the software program data recording, measurement points, outfit and use, and offers modular design, maximum flexibility and mobility, possible applications can be carried out on drying processes under vacuum and other procedures such as mixing and homogenizing, degassing, moistening and so forth. All process data points can be evaluated, re-appraised and available for the necessary Scale-Up calculations. All necessary PAT instruments and measuring elements are available, so that the lab dryer is configured to a production machine in every way.

Available are, or can be deliver as an option:

- Pressure sensor
- Temperature sensor at various point of measurement
- Manual sample taker
- NIR sensor
- Camera for the process observation at the PC
- Moisture gauge
- Pressure difference measurement for the filter

Tailor-made software can simulate the task of a production machine and supply important findings for the manufacturing process. The available control measuring elements allow the programming of a defined drying process by means of pressure, temperature and humidity curves. The proven conical design guarantees a free unobstructed, complete discharge of the valuable products.



The unit's small size was designed to allow for easy fit inside of a ventilation or containment booth in the lab. To place the dryer into the ventilation booth, the total height of the lab dryer can be reduced to a minimum height, for ergonomic working including filling and emptying, the lab dryer can be fitted onto a cart base.

Turnkey or in a modular design concept

The entire installation is designed for operating convenience. Upon request the installation can be equipped with the following installation components:

- Dryer
- SPS Control and lab software
- Vacuum system
- Solvent recovery system
- Heat / cooling system
- Mobile frame

Depending on the available possibilities in the lab, the above-mentioned installation components can be combined completely or in a modular way to create an entire system. If a heating/cooling system, a vacuum pump and a scale were already available in the lab, these utilities can be tied into already available interfaces inside the control system of the lab dryer-mixer.

Entirely new work and simulation possibilities become possible through the use of this new lab dryer-mixer during the development of the new products in the laboratory. Processes with small product amounts can be simulated in an early time of the development in order to gain important findings for the practical conversion to the production standard as well as their optimization.



Contact:

Bolz-Summix USA (Heinkel)
520 Sharptown Road
Swedesboro, NJ 08085
Tel: 856-467-3399
Fax: 856-467-1010
WWW.HEINKELUSA.COM