

POWDER DOSING UNIT

AUTOMATED PLATFORM TO DOSE POWDERS INTO OTHER RECIPIENTS

INTRODUCTION

Accurately dosing of powder from a sample container into another recipients is a very repetitive job. To reach the desired precision the lab technician needs a steady hand and has to stay focused not to make mistakes. It is possible that the powder is **hazardous** when in contact with the skin or if inhaled. Sometimes the powders can be **hygroscopic or not homogenic**. All of these factors introduce risks of inaccuracies.

Nucomat offers an automated platform to tackle all of the potential risks: an automated powder dosing unit to dose powder, grains, granulates, ...

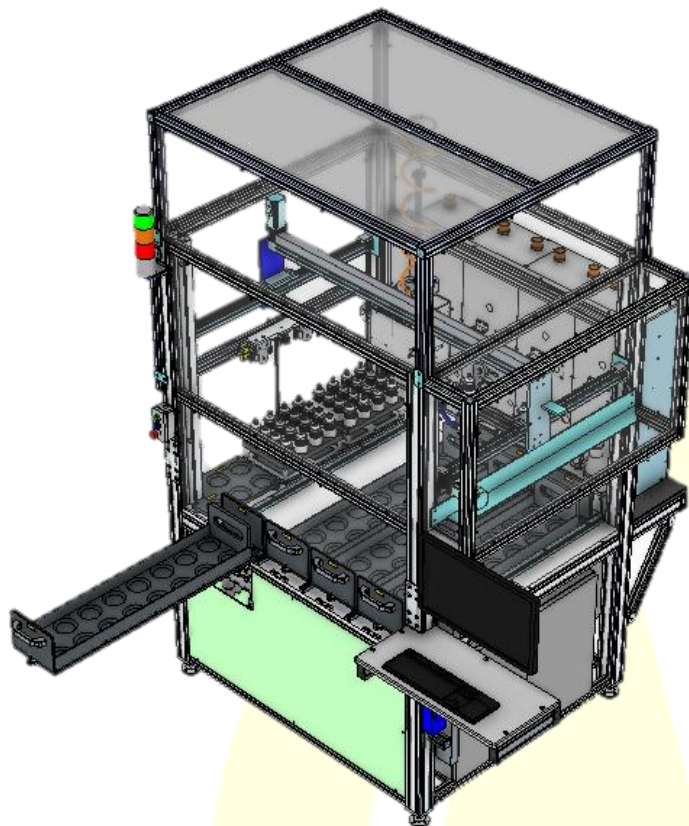


Figure 1: Render Powder Dosing Unit

AUTOMATED POWDER DOSING UNIT

Nucomat offers a solution for all your powder dosing action. The system has a modular build-up and can be tweaked to the customer's needs:

- Different types of output recipients (Erlenmeyer flasks, beakers, tubes, ...)
- Depending on the required throughput: # dosing stations can be increased
- Homogenization
- Optional deionizer to eliminate electrostatic charges
- Optional liquid dispensing
- Multiple sub-samples per incoming sample

By capping the input bottles the risk of the sample absorbing moisture out of the air is limited. Before dosing the cap is removed. The sample will only be exposed to air during the dosing itself.

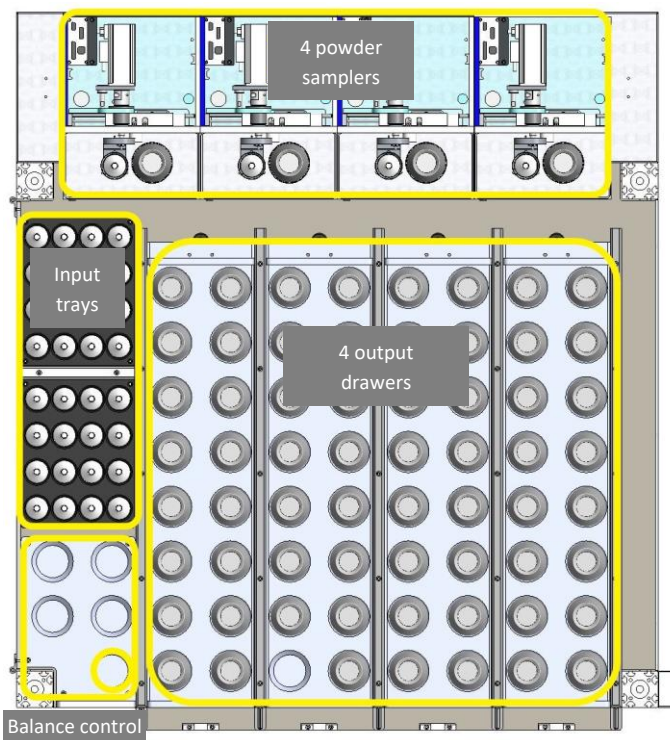


Figure 2: Example of a setup using 250ml Erlenmeyer flasks

Technical specifications:

- Dimensions: 2100 L x 2000 W x 2600 H mm
- Read-out precision of balances 10-4g
- 24/7 Operations
- Sample identification by input file or by barcode
- Automatic verification of balance accuracy
- Estimated throughput: up to 80 samples per hour
- Lims connectivity through in- and output files (csv, xml, ...)

CENTRAL WEB BASED SOFTWARE

The platform is controlled by **ROBIN**, a real time event driven **scheduling software** developed by Nucomat. The user-friendly web interface allows the user to run samples, oversee the processes and get information and timely warnings on addition of fresh reagents. All samples are electronically **tracked** from registration to result and relevant actions are logged to a database. Sample data can be validated online through the web interface and released for reporting, typically to a LIMS system. **Input and reporting** functionality is available with various file formats.



Figure 3: Web interface of the powder dosing system

BENEFITS FOR CUSTOMERS

- Operator safety
- Free up time for lab technicians
- Traceability and repeatability
- Gravimetric accuracy
- Validated results

<https://www.youtube.com/watch?v=5I4OTutqDzk>

TAILOR-MADE SOLUTIONS

Next to standard platforms, Nucomat also builds turnkey automated systems based on your requirements (required capacity, characterization protocols, ...). Instruments from other manufacturers can also be incorporated in the automated system to expand the system specifications.

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