

Powder Handling Made Easy with Our Customized Automated Powder Dosing System

Highly precise
and efficient dosing
of small and large
amounts of flowable
powder.



Precise results and more output

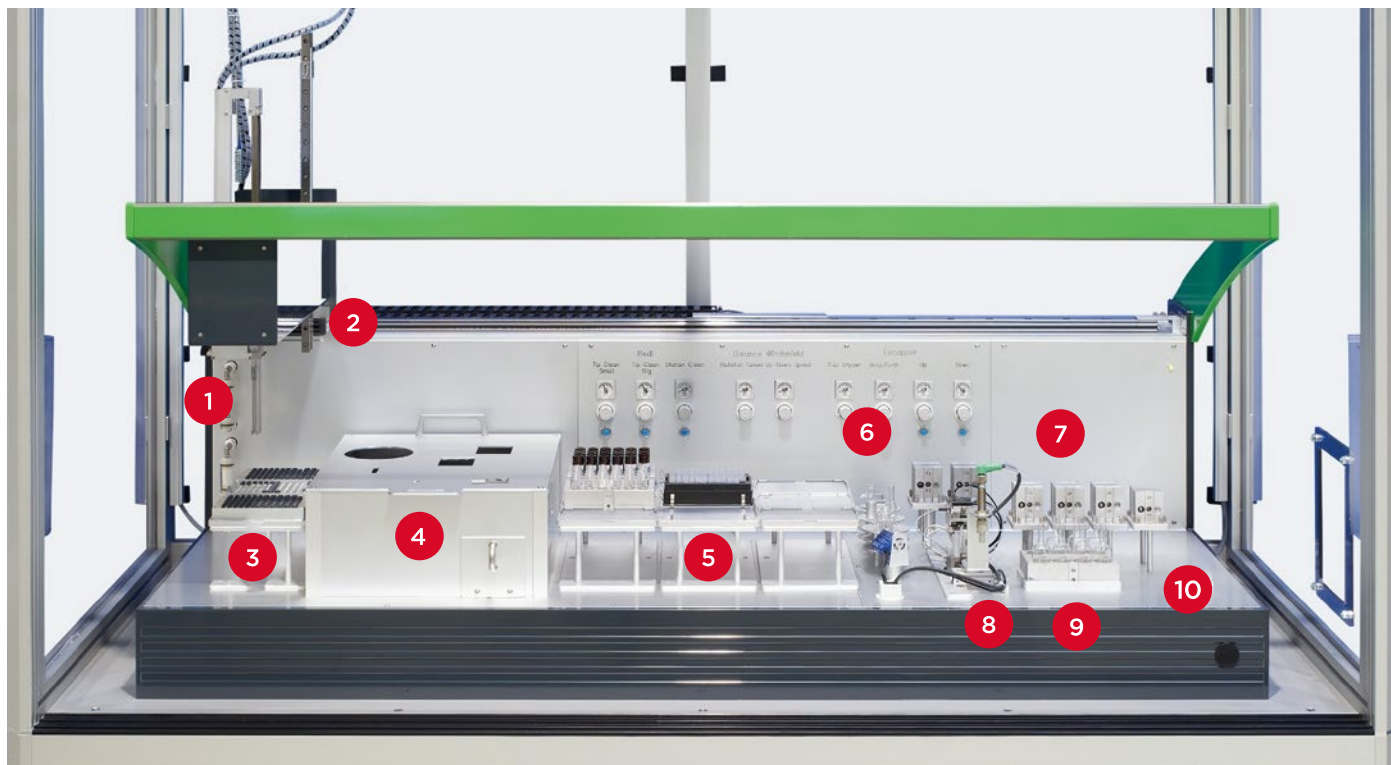
Transferring small amounts of powders can be a tedious and inefficient process, often leading to unprecise results. By automating the entire workflow, it frees your laboratory staff from time-consuming and repetitive work so that they can concentrate on more intelligent tasks. Our automated powder handling system is the best solution to boost your output and is able to achieve 300 full powder dosage cycles within 24h.

- ✓ Precise Aspiration and Dispense of Flowable Powder
- ✓ Reproducible and Reliable Results
- ✓ Calculation of Corresponding Densities and Volumes
- ✓ Gravimetric or Volumetric Aspiration and Dispense
- ✓ Identification and Documentation of Transferred Powders
- ✓ Customized Software Interface

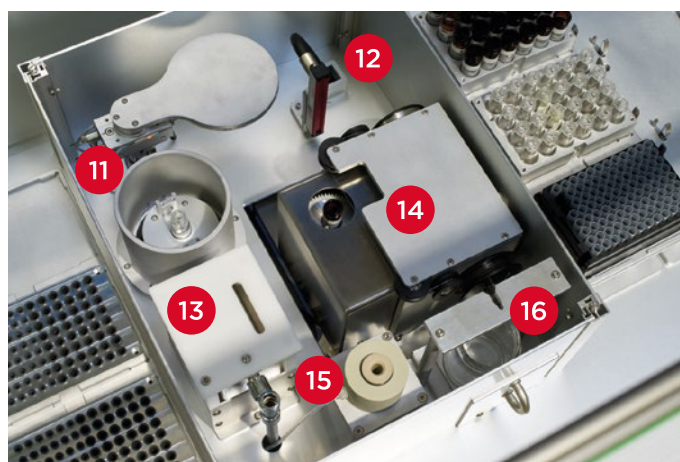


HARDWARE DESIGN

The hardware design for powder dosage processes has been developed in house and is optimized and adapted continuously. A recently sold platform, is presented as an example:



- 1 Powder tip adapter for two different powder tip sizes.
- 2 Gripper for racks and pick-up tools.
- 3 Racks for powder tips, two different sizes of tips.
- 4 Powderbox with balance, vial-shaker and tilter, ioniser, tip-cleaning and tip drop stations.
- 5 Incoming racks with capped source and destination vials (without caps).
- 6 Balance adapters for different vial dimensions.
- 7 Gripper pick-up tools applicable for different vial sizes.
- 8 Capping and decapping station with powder level sensor.
- 9 Parking position for automatically lidded racks.
- 10 Free space for transport rails to be incorporated later, fitting cut-out in right window of the housing.



- 11 Single vial balance with windshield.
- 12 Ioniser.
- 13 Ultrasonic bath for cleaning of powder tip adapter.
- 14 Shaking, tilting and turning unit for source vials with included stripping mechanism.
- 15 Air or nitrogen cleaning station for powder tips.
- 16 Powder tip disposal station.

AUTOMATED POWDER HANDLING

Automation of precise and reliable powder dispense is a solution Zinsser Analytic provides for more than 10 years. We offer customized systems based on our customers requirements. Our mission is to provide a reliable and high-speed robotic powder handling system to automate your process for for the best benefit of speed, labor-savings, efficiency and accuracy.

THE PROCESS

PROCESS



- Transport open source vial to vial shaker (either remove crimp OR screw cap manually OR open vials with a corresponding tool on deck) and destination vial OR MTP formatted rack into balance.
- Pick up new powder tip.
- Shake, tilt and turn vial to fluff powder.
- Aspirate desired amount of powder with vacuum.
- Swipe tip at top of glass.
- Move to balance and lift powder tip (through corresponding plate to push the tip up, for easier powder release).
- Dispense powder with air OR nitrogen flow into vial OR MTP rack.
- Wash powder tip in an air OR nitrogen blow station OR discard tip and clean powder tip adapter with ultrasonic bath.
- Repeat steps until all cavities of MTP rack OR until the desired amount of vials are filled.
- Return source and destination vials OR MTP formatted rack and start with next powder, If desired.

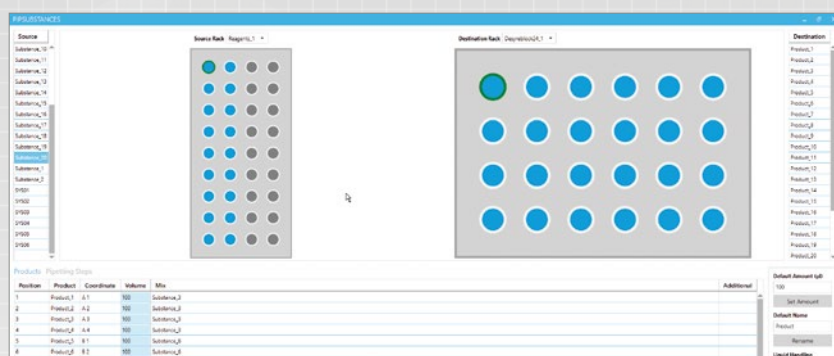
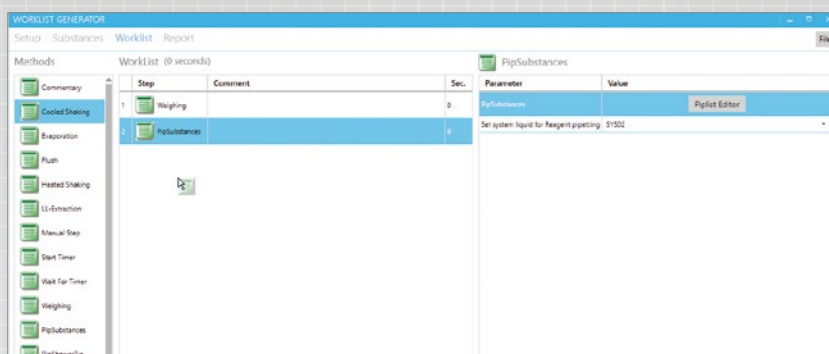
With this process a throughput of **300 full powder dosage cycles** is achievable **in 24 h.**

SOFTWARE SOLUTION FOR YOUR SPECIFIC PROCESS

Our software solution has a simple to use interface making it easy for your staff to configure or change process steps by themselves. Every process step is designed modularly to help to set up a variety of individual processes depending on different powders, chemicals and solvents. This way you can easily set up the powder handling system according to your requirements and processes.

Worklist Generator

Drag and drop the needed methods to the desired positions of the worklist.

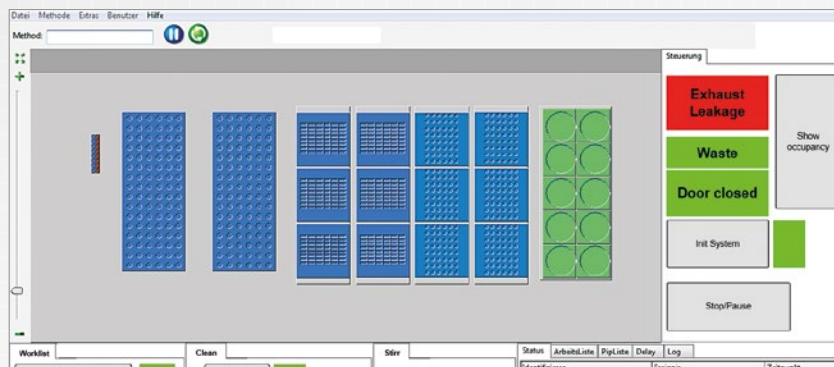
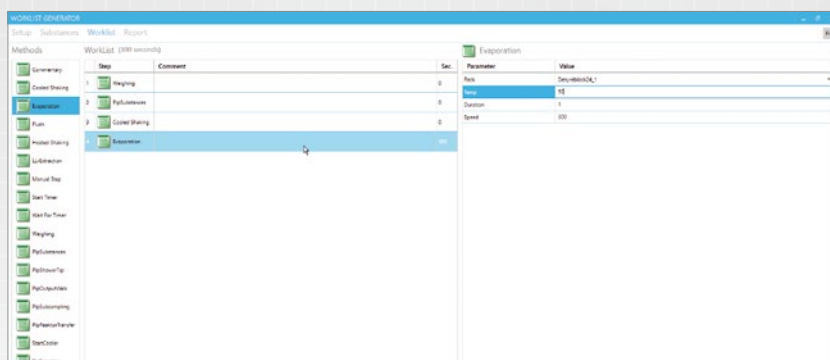


Pipetting Editor

For pipetting steps, the Pipetting-Editor is opened for the definition of racks and number of pipetting steps. Every filled position is indicated blue and the selected positions are highlighted green.

Method Definition

Input the desired time or anything the method requires, while you are defining the process.



WinLissy®-Software

With our WinLissy®-software every prepared worklist of the Worklist-Generator is executable. Communication with customer specific databases or LIMS is easily conceivable.

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