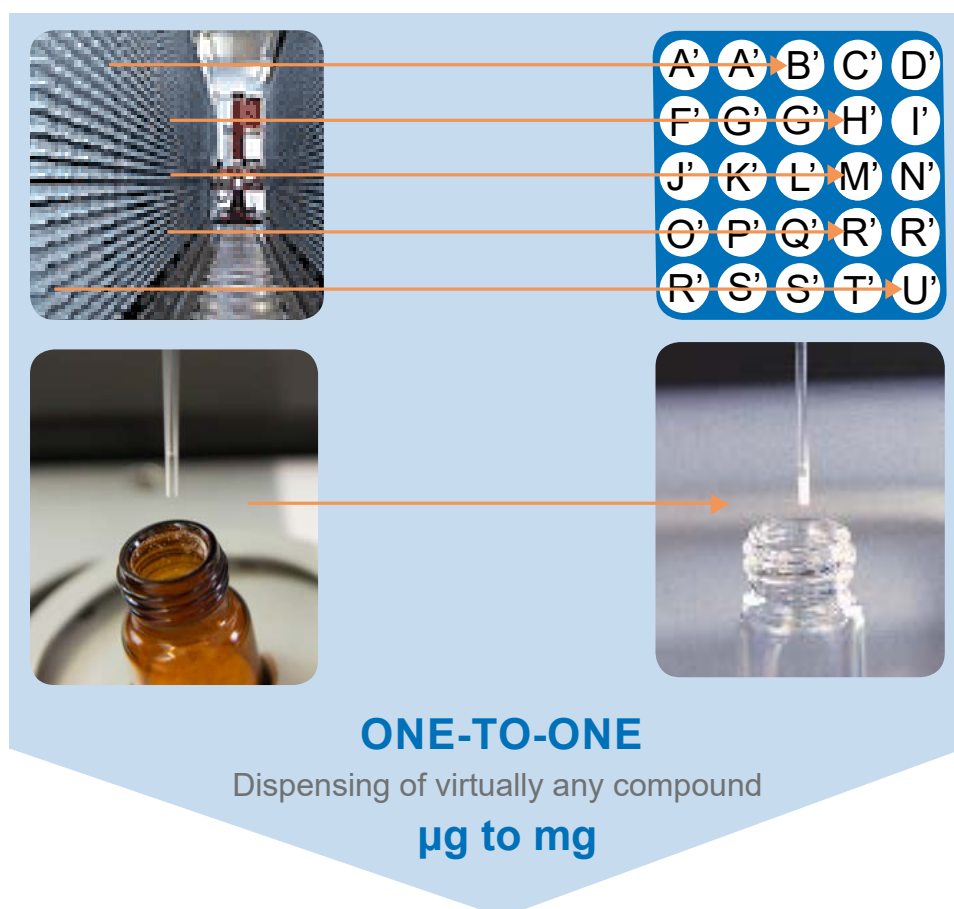


SWILE Compound Management Automated Workstation

Unlock Your Compound Management



Robustness and Ease-of-Use by Design

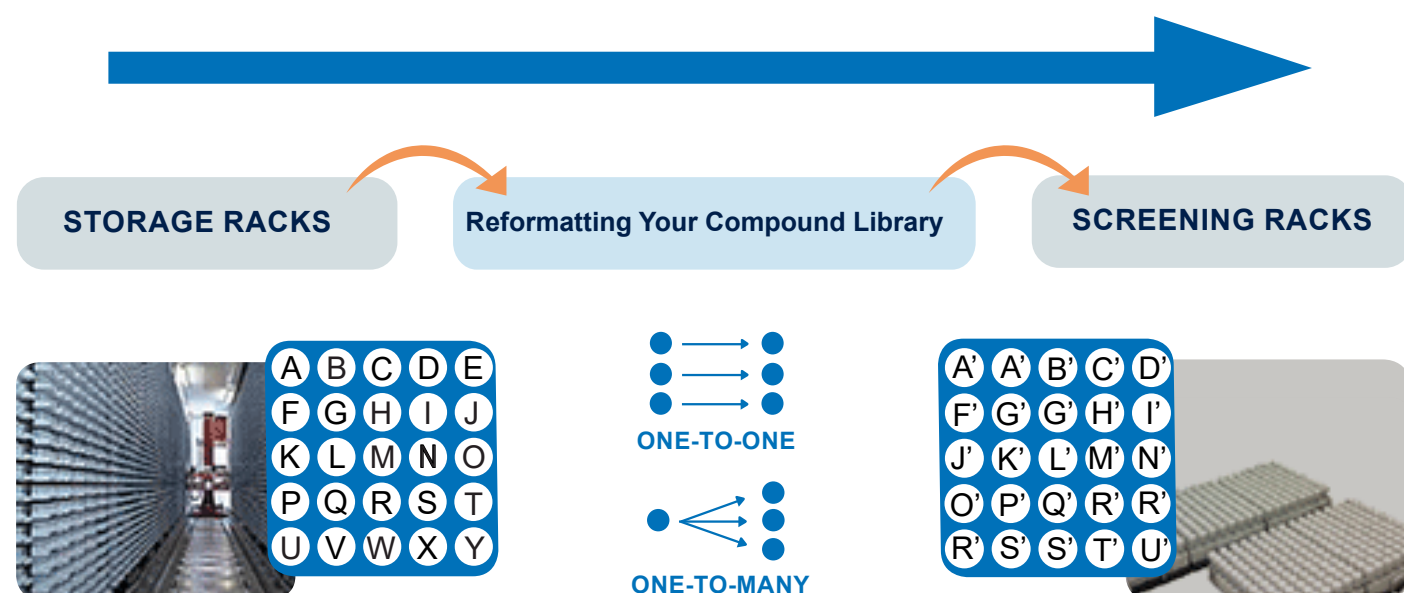
SWILE solid dispensing / dosing technology combined with our patented overhead gravimetric capability and our user-friendly software, allow you to automatically "pick & decision dispense" solid compounds directly from almost any source into any destination.

Precision – Speed – Accuracy
Performance – Versatility –
R&D Cost Savings – High-Throughput

"Compound Management – The Safe of Pharma Industry"

Pharmaceutical industry faces the increased demand for innovative medicines against various diseases. In this regard, the compound library in pharmaceutical industry is the most valuable asset. However, the compound distribution from the library into the screening plates is often still done manually and binds highly qualified resources to very time-consuming, tedious and error-prone tasks. Chemspeed's revolutionary SWILE automated workstation provokes a step change in compound management.

Enhance your Efficiency and Productivity with our Workflow Solutions!

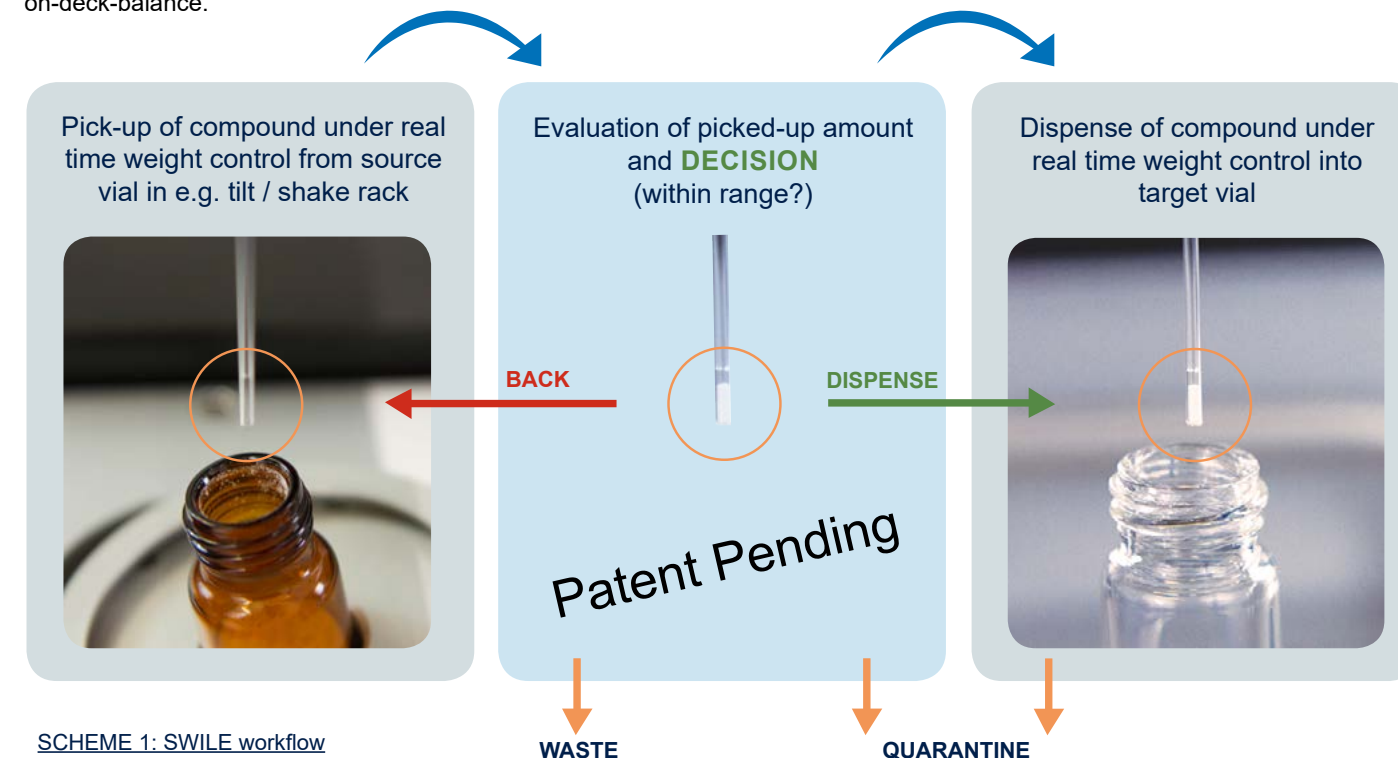


Key Features:

- Revolutionary accuracy & precision due to decision dispensing.
- Automated "pick & decision dispense" from almost any source into any destination.
- Dispensing range from < 0.1 mg to 100 mg with +/- 10 µg resolution.
- Disposable glass tips (SWINs).
- No cross-contamination.
- No dead volume.
- A recovery rate equal or higher than in manual procedures.
- Unattended operation (with optional inert atmosphere).
- Boost in your R&D process and time to market.

Breakthrough Dispensing Technology - Ultimate Decision Dispensing

The SWILE technology is the **first fully automated true one-to-one gravimetric "pick & decision dispense" of compounds**. The below scheme displays the simplified SWILE workflow including a precision "pick & decision dispense" step. The technology backbone is following Chemspeed's proprietary overhead gravimetric dispensing tool design in combination with a second analytical on-deck-balance.



SCHEME 1: SWILE workflow

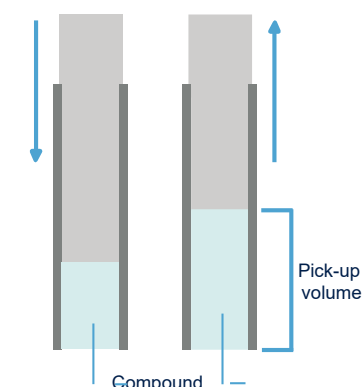
■ Main Flow ■ Decision

Accuracies and precisions are tremendously increased by this "pick & decision dispense" algorithm. The integrated balance of the SWILE tool has a resolution of 0.1 mg which actively measures during the pick-up process. This enables a controlled pick-up of the target amount prior to the actual dispense.

During the latter, the on-deck-balance with a resolution of 0.01 mg is actively recording the weight of the received compound and enhances the accuracy and precision by controlling the SWILE tool. In comparison to conventional micro dispensers no manual pre-filling of containers is needed, as a direct transfer from any kind of source (e.g. vial, tube, plate) into any kind of destination (e.g. vial, tube, plate) can be conducted.



Example of an automated SWIN (disposable tips) dispenser



Adjustable tip volume and capillary size according to target amount and density

In order to exclude any risk of cross-contamination disposable glass tips are used which are stored and provided by a SWIN dispenser.

They are available in different sizes (diameter) and can be adjusted according to the desired target amount to be dispensed. Additionally, a tilt / shake rack is used which is loosening up and tilting the powder prior to the pick-up.

Technical Details

Chemspeed's **SWILE Compound Management** deck modularity allows the user to execute and perform a variety of solid and powder dispensing workflows in a fully automated fashion.

The **Gravimetric Dispensing Units** (**SWILE**, **SWIP**, **GDU-P FINE DOSING**, **GDU-P**, **GDU-HV**, **GDU-V** models) are used to perform automated, gravimetrically controlled dispenses of a wide range of ingredients in the sub-milligram to multigram scale.

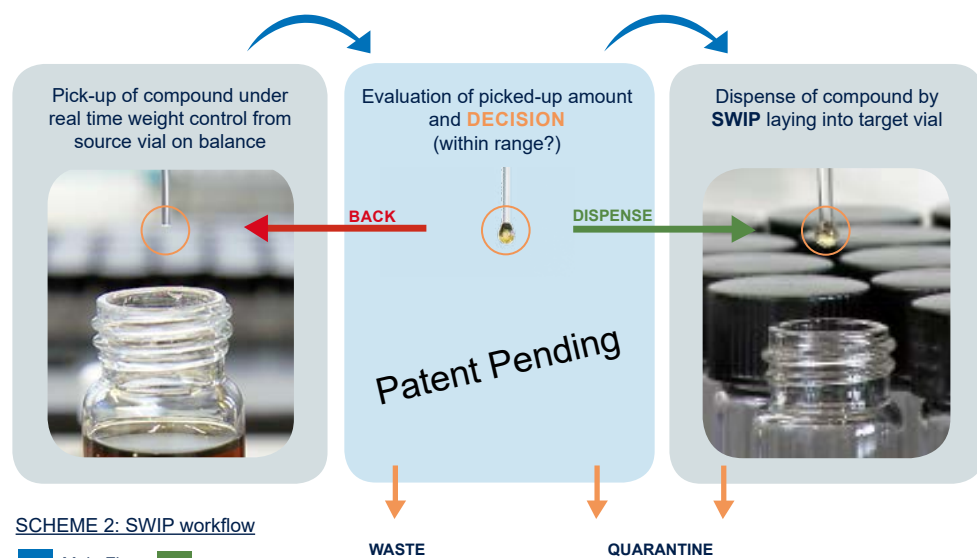
SWING dimensions:
1'480 x 910 x 1'860 mm
(4' 4 3/8" x 3' x 6' 1 1/4")

SWING XL dimensions:
2'350 x 950 x 1'920 mm
(7' 70" x 3' 2" x 6' 4")

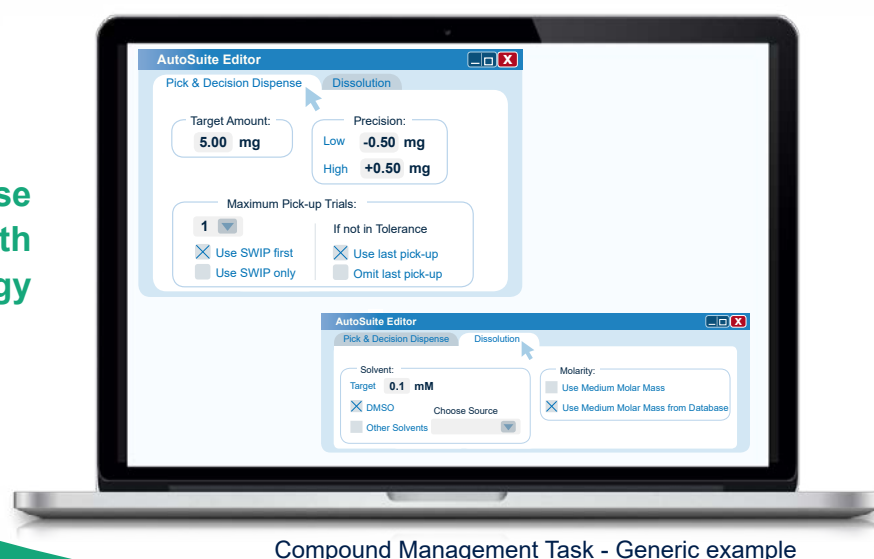


	Compound Type	Balance Resolution	Dispensing Range	Dispensing Container Volume
SWILE	Solids and Powders	down to 0.1 mg, optionally down to 10 µg with on-deck balance	< 0.1 mg to 100 mg	SWINs
SWIP	Liquid to Sticky Compounds		< 0.1 mg to 100 mg	SWIPs
GDU-P fine dosing	Solids and Powders		0.1 mg to 20 g	30 mL
GDU-P	Solids and Powders	down to 1 mg, optionally down to 10 µg with on-deck balance	1 mg to 100 g	100 mL

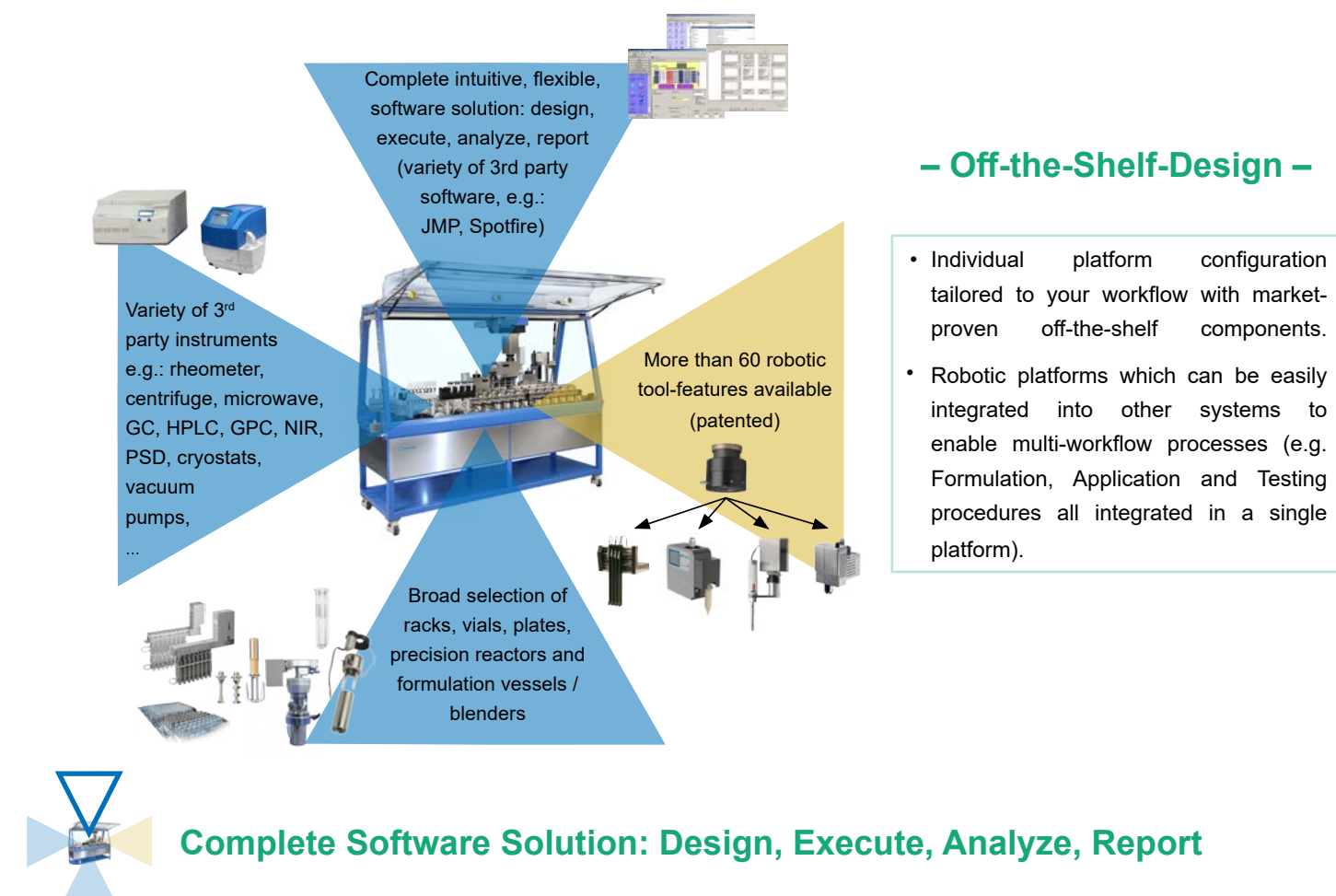
Furthermore, **Chemspeed** developed with the same technology the **SWIP** - "pick & decision dispense" of liquid, oily or sticky compounds.



Typical parameters to dispense a library of compounds with different morphology



4 Dimensions of Modularity and Flexibility



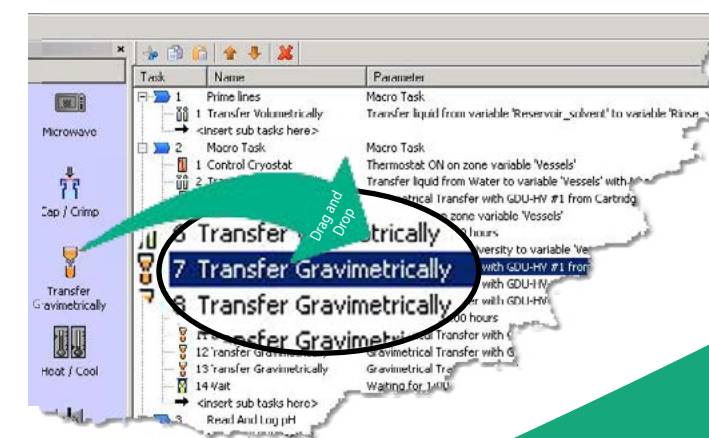
– Off-the-Shelf-Design –

- Individual platform configuration tailored to your workflow with market-proven off-the-shelf components.
- Robotic platforms which can be easily integrated into other systems to enable multi-workflow processes (e.g. Formulation, Application and Testing procedures all integrated in a single platform).

Chemspeed's AutoSuite User Interface & Executor software package executes and controls all modules of the entire product development cycle. AutoSuite controls all Chemspeed robotic platforms and any other integrated 3rd party software and hardware.

AutoSuite SWING is a software with a user friendly interface which allows easy workflow oriented programming. Many features such as gravimetric dispensing are automatically calibrated, eliminating tedious optimization steps.

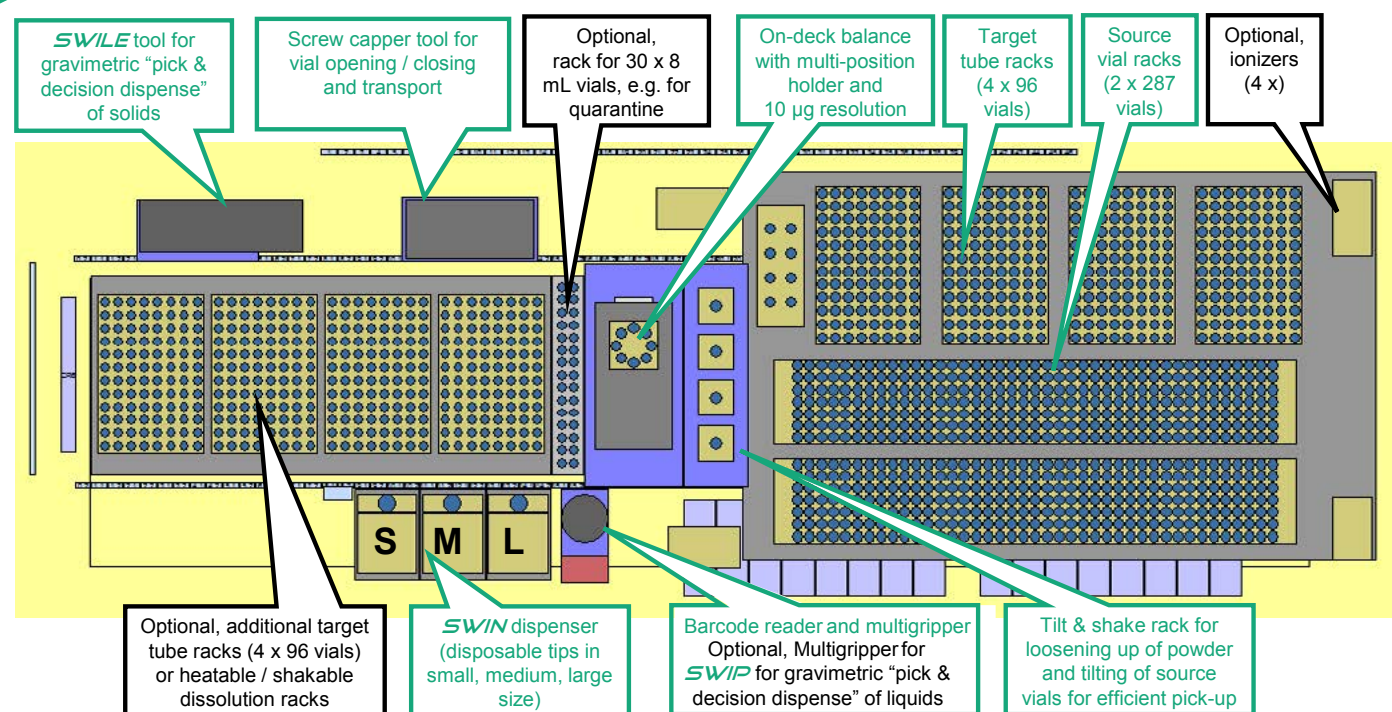
- **TheAutoTeaching** tool simplifies dispensing applications without manual trials and is applicable to e.g. solids eliminating the need for manual optimization before the dispenses are done.
- **Easy programming: drag-and-drop workflow steps or just execute standard workflow protocols.**
- Barcode tracking.
- Easy integration with virtually any LIMS or ELN software.
- **AutoSuite Application Programming Interface (API)** for 3rd party software and hardware integration.
- Optional, **Chemspeed VLab for DoE and Data Analysis / Reporting**. It includes a full document management system (electronic lab- journal) and is 21 CFR Part 11 compliant. The software scales from a single PC to large network installations with multiple hardware and clients.





Platform Configuration Example

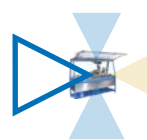
Exemplary **SWILE Compound Management** deck with source and target racks and the following tools: **SWILE**, screw-capper, multigripper, tilt & shake racks, on-deck balance.



All tools and accessories from **Chemspeed's** **ISYNTH**, **MULTIPLANT / AUTOPLANT**, **FORMAX**, **APPLICATOR** and **INVESTIGATOR** platforms are fully compatible with the **SWILE** robotic platform and vice versa.

Available upgrade options:

- **SWIP** "pick & decision dispense" of liquid, oily or sticky compounds.
- 4- or 8-needle liquid handling tool for e.g. dissolution.
- Shakable and heatable racks for e.g. dissolution.
- etc.



Variety of Plug-in (3rd party) Solutions

Chemspeed integrates a large number of 3rd party components either on and / or off the deck.

Available upgrade options:

- Analytical interfaces for e.g. GC, HPLC, NMR, NIR, particle size distribution, imaging.
- etc.



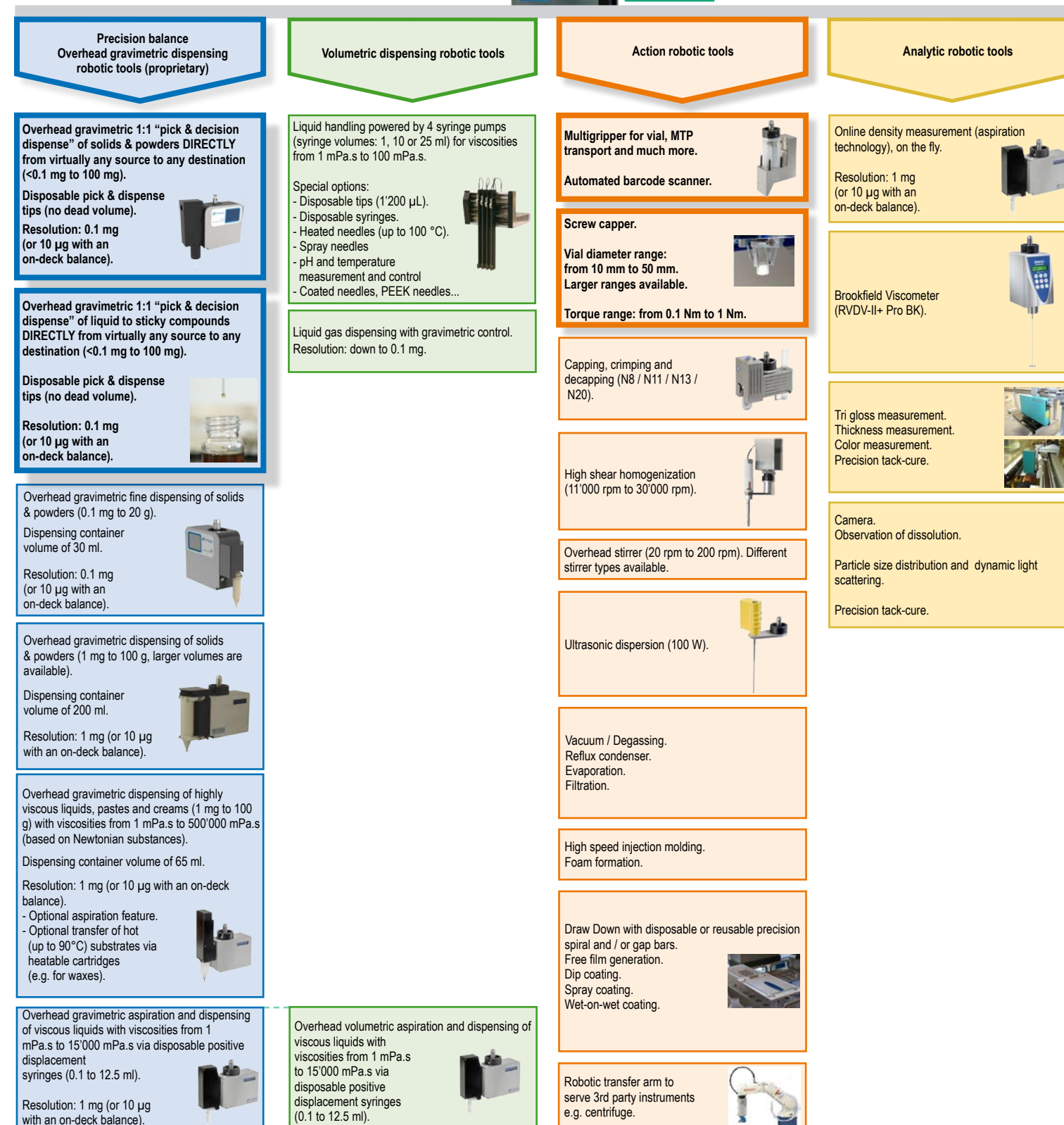
Robotic Tool-Features

More than 60 robotic tool-features can be integrated with **Chemspeed's** unique robotic tool exchange technology, including unrivaled overhead gravimetric dispensing, which can operate while mixing, heating, refluxing and cooling. Virtually any combination of these robotic tools is possible.

Highlighted are the most common and recommended robotic tool-features for the **SWILE Compound Management** robotic platform.



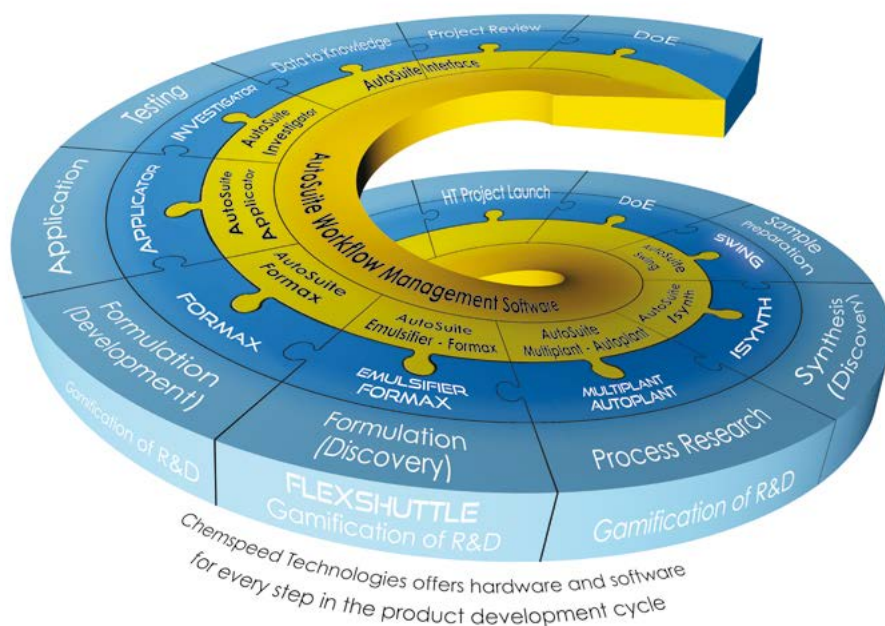
Robotic tool exchange interface (proprietary)



Headquarters
Chemspeed Technologies AG
Wölferstrasse 8
4414 Füllinsdorf
Switzerland
Tel: +41 61 816 9500
Fax: +41 61 816 9509
chemspeed@chemspeed.com
www.chemspeed.com

US Office
Chemspeed Technologies Inc.
113 North Center Drive
North Brunswick, NJ 08902
United States
Tel: +1 (732) 329 1225
Fax: +1 (732) 329 1226
us@chemspeed.com
www.chemspeed.com

UK Office
Chemspeed Technologies Ltd.
Heslington, York, YO10 5DD
United Kingdom
Tel: +44 (0) 1904 409579
uk@chemspeed.com
www.chemspeed.com



Discover our enabling portfolio for the entire product development cycle!



Please contact your Chemspeed representative and share your questions and projects with us. We would love to help you!