

SWING

**Automated Reaction
and Sample Preparation**

The **Chemspeed's SWING** is designed for high throughput automation of substance handling tasks. The instrument's unique design accommodates several tools that can be automatically exchanged during a run. The availability of both a solid dispensing unit and a 4-needle liquid handling unit on the same platform enables highly efficient, accurate and precise dispensing of more than 95% of catalogue chemicals.

Applications

- Compound handling
- Sample preparation (e.g. analytics)
- Reaction preparation (e.g. addition of catalysts)
- Library synthesis, Hit-to-lead
- Pre-formulation (solubility, stability, compatibility screening)
- Formulation
- Polymorphism studies
- Packaging / Filling services

Unique solid dispensing technology



Flexible dispensing design

Built-in balance for accurate and precise dispensing (standard deviation down to 0.1 mg)

- Dispensing range from milligrams to multiple grams
- Any solid morphology, or even highly viscous oils
- Any type of vial, well plate or reactor (even when the reactor is connected to external supplies).
- Reduced dispensing time: the balance moves from one receptacle to the next, continuously dispensing and weighing without having to move the receptacle to the balance.



Unique solid dispensing technique allows for dispensing into any kind of receptacle, like MTPs, vials or reactors.



Gravimetric Overhead Solid, Viscous Liquid, Paste dispensing (1.0 mg – 20 g, resolution 0.1)

- Dispensing directly into the reactor
- Dispensing under a controlled atmosphere
- AutoTeaching: Just enter your target weight, and the first dispensing into your reactor or vial will be precise, accurate, fast and fully automated



High precision balance inside



Capping, crimping, gripping, de-capping



Efficient SPE (Solid Phase Extraction) with disposables

SWING

Automated reaction and sample preparation



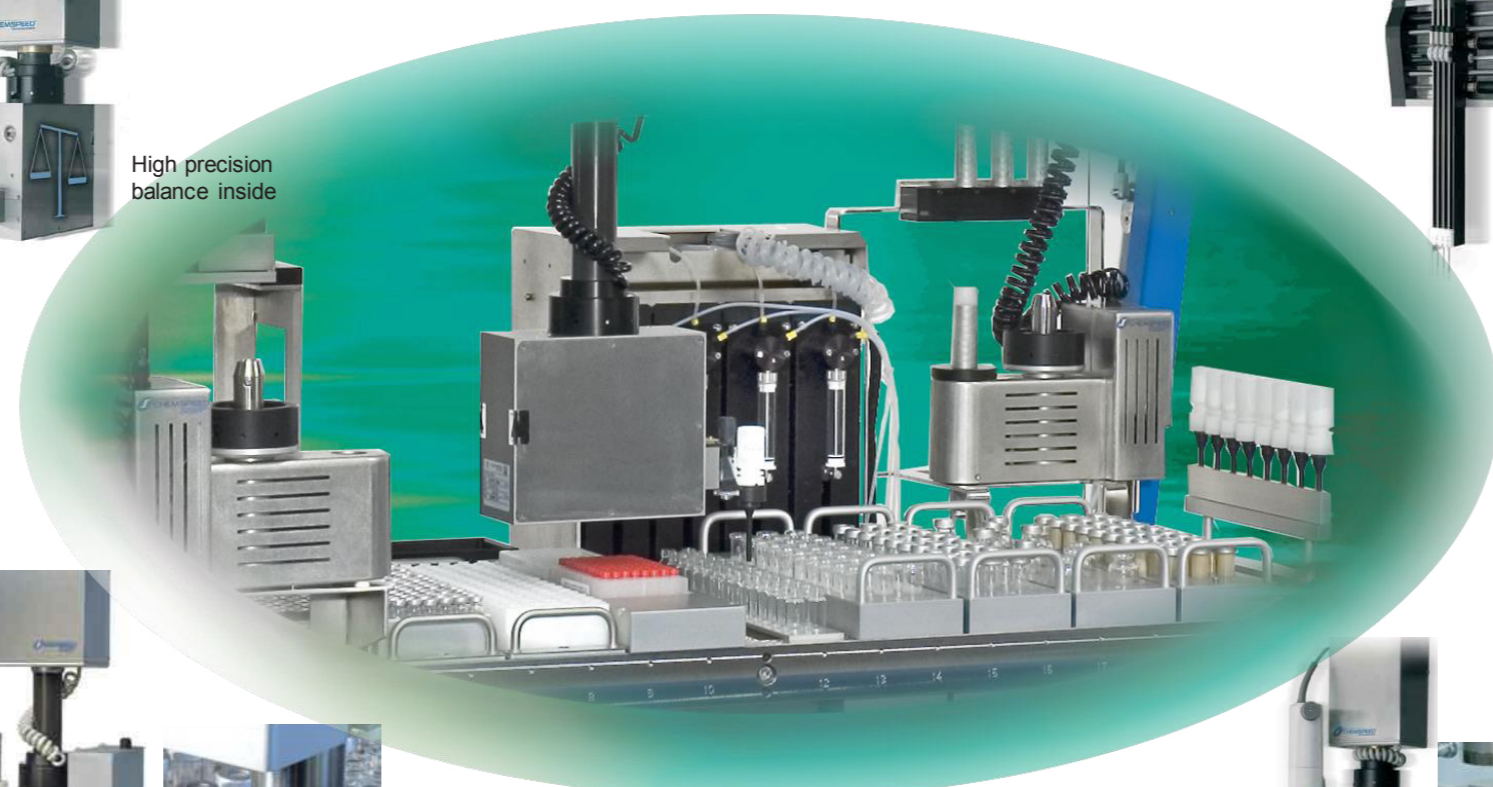
A unique choice of exchangeable tools for automated compound handling, library synthesis, formulation screening...



...whatever your reaction format is.

Multi-channel liquid handling

- 4-channel pipetting tool
- 4 septum-piercing needles of different sizes operating either independently or simultaneously
- Disposable Tips
- Heated Needle
- pH-Probe
- Free rotation allowing full positioning flexibility (horizontal, vertical, diagonal) to fulfill any liquid handling protocol



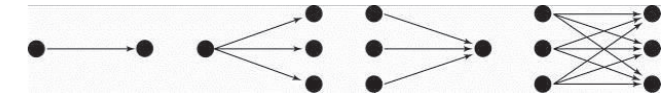
High-shear homogenizing and sonifying

- Dispensing, homogenizing, cell disrupting, mixing, emulsifying, suspending
- Fully automated exchange of cutters during operation



Multiple dispensing configurations

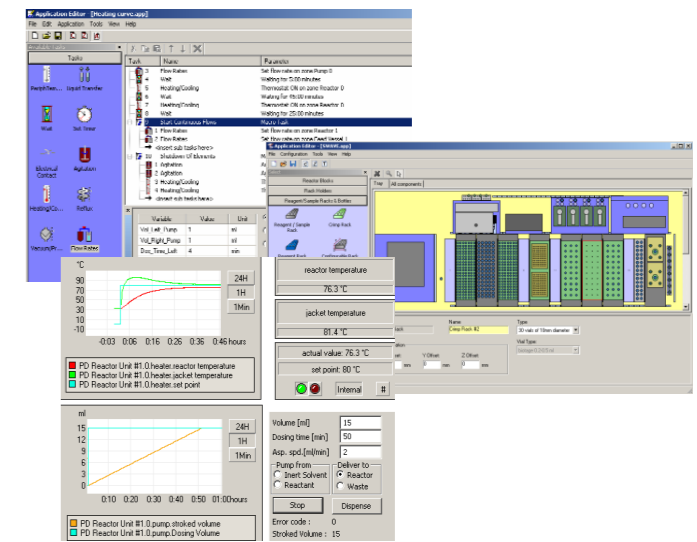
One-to-one, one-to-many, many-to-one, many-to-many (for applications requiring combinatorial dispensing)



AutoSuite Workflow Management Software

For easy integration with your laboratory software tools, AutoSuite software offers instrument control, data acquisition and processing, integration with applied informatics

- Easy programming: drag-and-drop chemical tasks
- Easy customization of recurring steps into macro tasks
- Simulation of application
- Real-time visualization of process parameters
- Interface with most laboratory software tools



Technical Data

Standard Configuration

Robotic platform

- Robotics: X, Y and Z arm with rotating alpha-axis and automatic tool exchange
- Optional heating/cooling, shaking
- Controlled atmosphere: inert gas, with optional glove box
- Optional trolley
- Dimensions (l x d x h): 1330 x 910 x 1200 mm (4'4 3/8" x 3' x 3' 11 1/4")

Solid dispensing

- Weighing range: 1mg up to 10g (optionally 20g)
- Resolution: 0.1mg
- Solid container capacity: 15mL (optionally 30mL)
- Capacity to 96 solid dispensing containers

Liquid handling

- 4-needle pipetting head with variable spacing from 9mm (MTP format) to 54mm
- 4 high resolution syringe pumps with a choice of 1mL, 10mL or 25mL syringes and 2 way-6 port ceramic valves (up to 16 solvents)
- Septum-piercing needles, spraying needles
- HPLC injection valve (up to 4 valves), other interfaces with analytics available (option)

Optional Configuration

High Shear Homogenizer

- Sample volume: 5-1000mL
- Speed range: 11 000-30 000rpm
- 4 cutter sizes
- Dedicated dynamic rinsing and drying station

Sonifier Robotic Head

Capping, Crimping & Gripping tool

- Single tool for capping, crimping and gripping of glass vials
- De-capping tool
- Vials: N11 or N20 crimp-top vials, other sizes upon request
- Upgrade kit to **SWEIGHER** or **SWAVE**



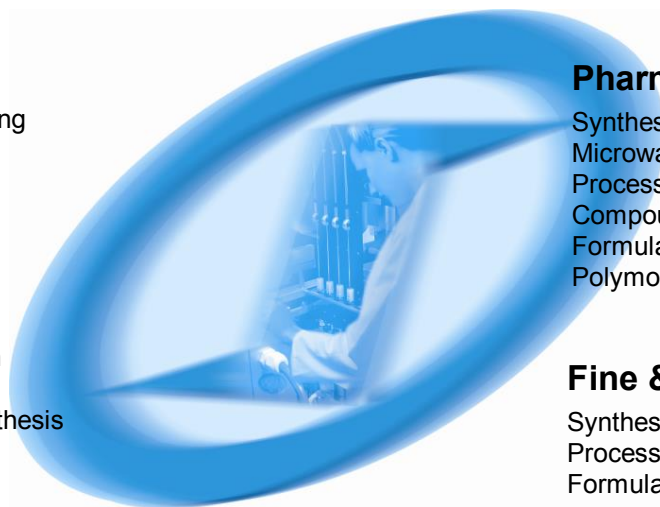
Automated Chemistry and Formulation R&D Solutions

Materials Science

Catalyst synthesis and testing
Catalyst optimization
Process R&D
Formulation

Polymers

Emulsion, suspension
& dispersion polymerization
Pressure polymerization
Microwave and parallel synthesis
Process R&D
Formulation



Pharmaceuticals Agrochemicals

Synthesis
Microwave synthesis
Process R&D
Compound management
Formulation & solubility screening
Polymorph screening & optimization

Fine & Specialty Chemicals

Synthesizers
Process R&D of small molecules
Formulation screening & optimization