

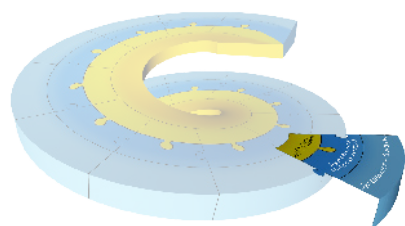
# SYNTHESIZER PRORES

from concepts to success

- Process research (screening & optimization of critical process parameters) -



# from concepts to success



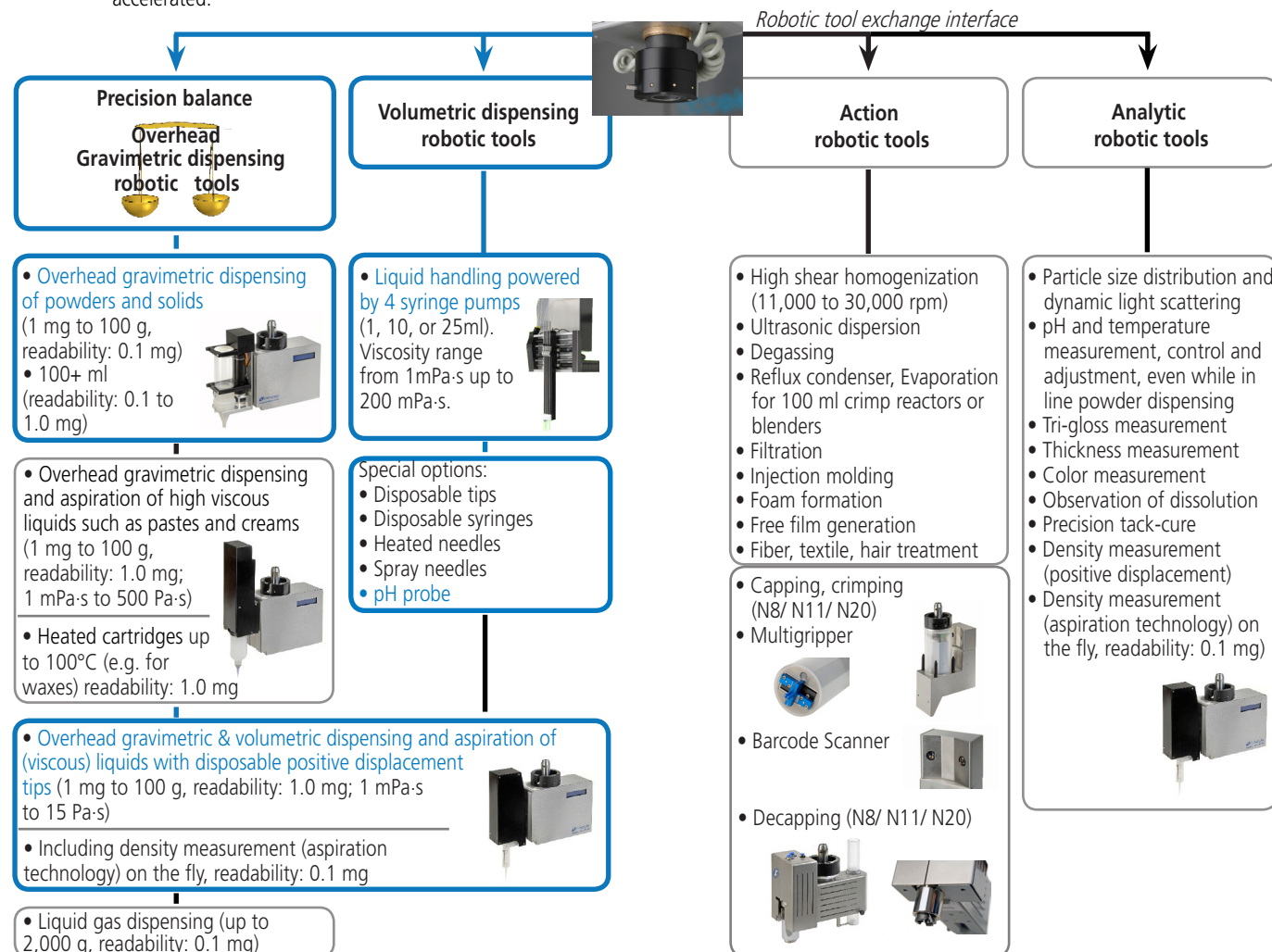
## SYNTHESIZER PRORES, a modular robotic platform enabling process research

SYNTHESIZER PRORES is Chemspeed's software-driven robotic platform for challenging routines in early process research such as process finding, reaction parameters screening, execution of DoE worksheets, optimization of reactions, work-up and purification condition.

- SYNTHESIZER PRORES brings paradigm shifting modularity enabling an easy to use workflow task driven software
- Exchangeable robotic tools
- Unrivaled gravimetric dispensing technology **directly immersing into the target** including an **anti-drip system** which avoids cross contamination
- Unique reactor block and reactor array technology
- A large choice of hardware and software tools allow fine tuned adaptation to your workflow

## Unrivaled gravimetric dispensing technology & exchangeable robotic tools

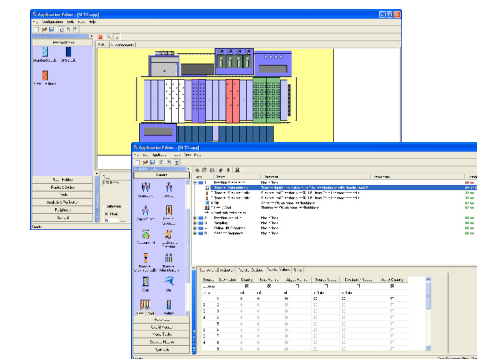
More than 30 features can be delivered with Chemspeed's unique robotic tool exchange technology, including unrivaled overhead gravimetric dispensing tools. Dispensing solids is as convenient and accurate as dispensing liquids. The product development R&D cycle is accelerated.



## Powered by AutoSuite SYNTHESIZER PRORES user interface

AutoSuite SYNTHESIZER PRORES is an intuitive user interface software which allows easy workflow orientated programming. Many features such as the gravimetric dispensing steps are automatically calibrated, eliminating tedious optimisation steps.

- The **AutoTeaching** tool allows to dispense solids, liquids, viscous liquids, and waxes without manual optimizing steps, and with high precision, accuracy and speed
- Easy programming: drag-and-drop workflow steps
- Barcode tracking
- Smooth integration into Chemspeed's workflow management software (see reverse)
- AutoSuite Application Programming Interface (API) for 3rd party software and hardware integration (standard integration of Spotfire, JMP, VirtualLab etc. as well as many instruments listed on the reverse page)



## Highly-functional disposable and reusable reactors format

Chemspeed is able to dispense virtually any type of compound into any type of container (vial, microtiter plates, bottles, reactors, formulation vessels etc.)

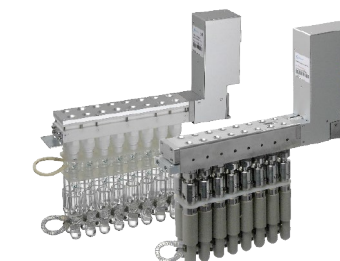
(Please refer to other Workflow Brochures)

### Key Features:

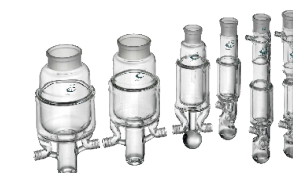
- Interface for DoE
- Jacketed glass reactors in different sizes (2 ml - 100 ml)
- Heating/ cooling via jacket from -70 to 180°C
- Individual heating function available
- Reaction scheduling software
- All relevant work-up & purification unit operations can be run:
  - evaporation under vacuum/ heating
  - filtration (left to right or to waste)
  - liquid/liquid & solid-phase extraction
  - crystallization
  - Dean-Stark
- Glass reactors for ambient pressure, stainless steel reactors for pressures up to 100bar
- Multi-step and branched workflows
- Reflux condenser
- Different agitation principles (mechanical & vortex)
- Automated overhead addition of chemicals
- Temperature control via jacket and via internal measurement
- Overhead sampling
- Disposable formats for sample work-up and sample preparation
- In-and-online analytics available or interfaced (pH, HPLC, GC etc.)
- Superior inert condition



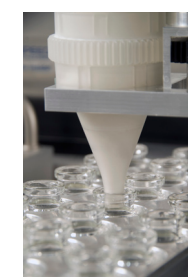
SYNTHESIZER PRORES deck view



Arrays of double-jacketed glass and stainless steel reactors



Choice of various reactor sizes: 100 ml, 75 ml, 27 ml, 13 ml, 2 ml



Overhead gravimetric dispensing of solid in high-performance disposable reactor

**NOW AVAILABLE:**  
Disposable glass reactors





## Accessories

All tools and accessories of Chemspeed's Swing, Sweigher, Swave, AutoPlant, Formax, Applicator and Investigator are fully compatible with the **SYNTHESIZER PRORES** robotic platform and vice versa (see the high output product development spiral below). Please refer to Chemspeed's other workflow brochures for modularity examples.

- Reaction scheduling software
- Individual heating module
- Heating/cooling/shaking in disposable formats
- HPLC, GC including corresponding interfaces
- Analytical probes (temperature, pH) measurement tool
- Large choice of sample, reagent and customized racks
- Cleaning module
- Tailor-made customer care module



## High output product development spiral

Chemspeed's AutoSuite workflow management software integrates with:

### 1. All of Chemspeed's robotic platforms for

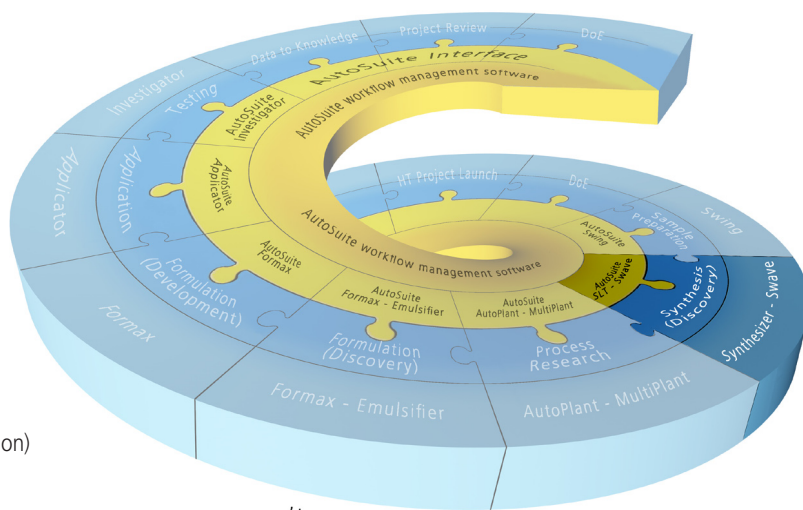
- Sample preparation workflows
- Parallel array synthesis workflows
- Parallel process research workflows
- High output formulation workflows
- High output application workflows
- High output testing workflows

### 2. Third party instruments

Chemspeed integrates a vast number of 3rd party components (e.g. in robotic tools). Please refer to Chemspeed's Workflow Portfolio brochure and/or contact your Chemspeed's representative.

### 3. Third party software such as

- SpotFire (premium data visualization and selection)
- JMP (design of experiments - DoE)
- VirtualLab (lab journal, workflow management, instrument control)
- and many other laboratory software through industry standard languages (SQL, .net, C#, etc)



Hardware - Software - Logistics  
Chemspeed Technologies offers all.

