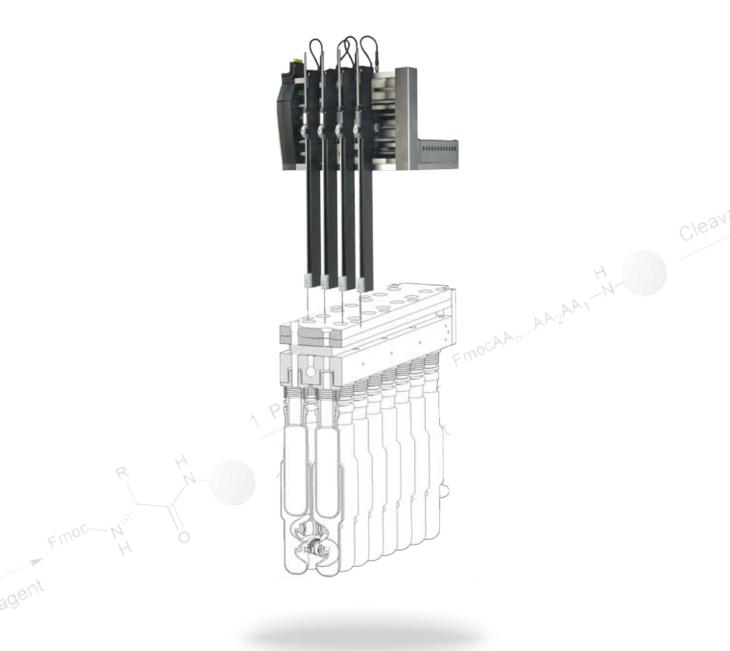


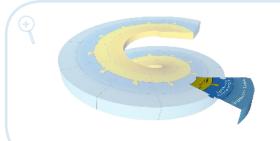
from concepts to success

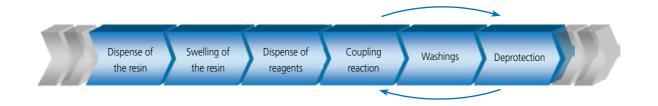
- Automated parallel peptide & oligosaccharide synthesis -





from concepts to success









PSW, a modular robotic platform enabling parallel peptide & oligosaccharide synthesis

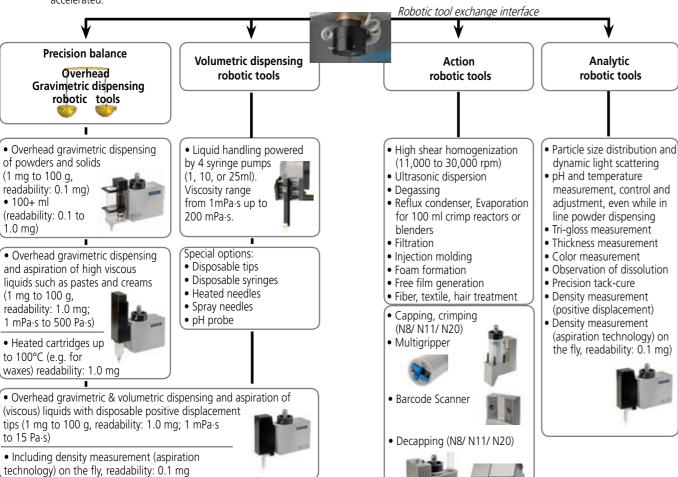
PSW, is a software-driven robotic platform which provides exceptional performance and delivers high quality peptides and oligosaccharide libraries through fully automated, unattended solid phase and solution phase chemistry.

- PSW brings paradigm shifting modularity enabling an easy to use workflow task driven software
- High throughput and scalability reactors
- A large choice of hardware and software tools allow fine tuned adaptation to your workflow
- Automation of complete peptide & oligosaccharide synthesis workflows on one robotic platform



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.



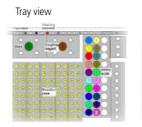


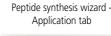
Powered by AutoSuite PSW user interface

AutoSuite P5W 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)

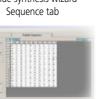
Protocols and peptide sequences (defined in 1 or 3 letter code) can be stored for subsequent use. A single dialog window allows the user to define all the parameters of the synthesis: number of peptides, length of the peptides, type of resins (pre-loaded or not), synthesis protocol (simple or double coupling, de-protection, etc.), washing parameters (solvent, time, volume, etc.). All required volumes are automatically calculated by the software. Reagent parameters can also be handled by the software (concentration, molecular weight etc.). The number of equivalents for each reagent can be defined to suit your project.







Peptide synthesis wizard -













High throughput and scalable reactors

- Up to 80 peptide reactions on solid support at a time and automated transfer of resins
- On-line connection to analytical/ preparative HPLC
- Different glass reactor sizes (2 ml, 13 ml, 20 ml, 27 ml, 50 ml, 75 ml and 100 ml volume) are available for applications
- Different reactor types: disposable glass reactors or double jacket glass reactors
- Parallel filtration to common waste line
- Disposable filters of different porosities and materials
- Inert materials for all parts in contact to chemistry (glass/ PTFE)
- Storage vessels (8/ 13/ 20/ 50/ 60/ 100/ 250 ml) for amino acids and coupling reagents
- Up to 6 storage vessels (2.5l) for bulk solvents and reagents

Chemical Features

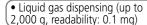
- Variety of coupling reagent methods, including pre-activation of amino acids
- Cleavage of peptides (TFA/ TFMSA/ TMSOTF)
- Scalable from 50 milligrams to 5 grams of resin (range of micromoles to millimoles depending on the loading of the resin)
- Heating and cooling
- Gentle, yet effective agitation of resin suspensions and slurries by orbital shaking
- Filtration to a common waste container without cross-contamination
- Rinse station (inside/ outside) to avoid cross-contamination
- Collection of peptides into vials, microtiter plates or customized format
- On-line evaporation of peptide solvent after cleavage in storage vials
- Inert atmosphere for sensitive reagents or reaction conditions



PSW parallel filtration unit featuring disposable filters



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





Accessories

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

- Upgrade to a parallel synthesizer for solid & solution phase chemistry and/ or microwave synthesizer
- Variety of racks for reagents and samples
- 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

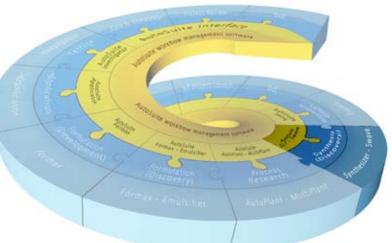
- Sample preparation workflows
- Parallel array synthesis workflows
- Parallel process research workflows
- High output formulation workflows
- High output application workflows
- High output testing workflows

2. Third party instruments

Chemspeed integrates a vast number of 3rd party components (e.g. in robotic tools). Please refer to Chemspeed's Worfklow 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)



Harware - Software - Logistics Chemspeed Technologies offers all.



