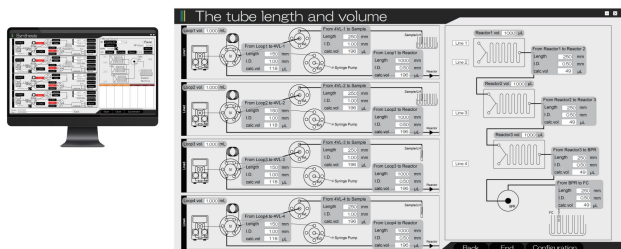


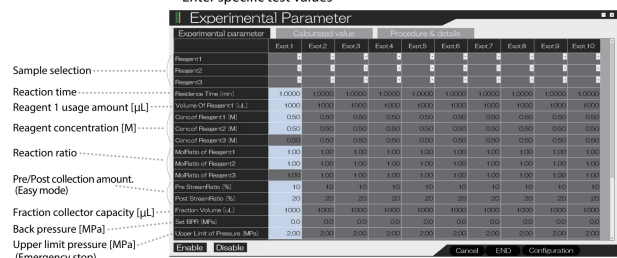
Software (Last part: Synthesis Conditions Detailed Parameter Input)

- Refer to the synthesis conditions for batch synthesis before entering the reaction conditions, such as reagent concentration, amount, and reaction time.

5. Componential parameters Enter the reactor capacity, loop capacity, and piping length.



6. Experimental parameter Enter specific test values



- Selecting the Easy or Advanced collection mode enable a wide range of needs from drug discovery research to process review.

- Target product synthesis is completed. It's optimal for multiple different small-quantity sample synthesis.

Compact size that can be placed inside the draft.



Example configuration / Sale price, Specifications

	3Line Sys C / Sys B / Sys B	2Line Sys B / SysB	2Line Sys A / SysA
Plunger Pump (PP)	3	2	2
Injection Valve (IV)	3	2	2
Automatic Back Pressure Valve (ABPR)	1	1	1
Fraction Collector (FC)	1	1	1
Syringe Pump (SP)	2	1	-
1-4 Way Valve - Syringe Pump Side (4VS)	3	2	-
1-4 Way Valve - Sample Side (4VL)	3	2	-
Liquid Handler (LH)	1	-	-
Control Box	2	1	1
Automatic Synthesis Software	1	1	1
Device Size	W1300xD600xH680mm	W650xD600xH680mm	W650xD600xH340mm

Reactor sold separately. Shipping, handling, and other miscellaneous costs not shown.

	Specifications	Remarks
PP flow speed setting range	0.01 ~ 9.999ml/min	Calculate from reaction time
Minimum reagent usage amount	500 μ L ~	
Syringe - Loop capacity	2.5ml-1ml, 12.5ml-5ml	
ABPR setting range	0.1 ~ 1.5MPa	
LH	24well, 96well	Supports specially ordered racks
FC	Test tube x 71 (standard)	Supports specially ordered racks

Optimal for research and development in medicinal chemistry
Supporting the synthesis of multiple different small-quantity samples

OptimFlow

Optimized for synthesis



→ Background behind the need for automatic synthesizers

Pharmaceutical manufacturer

Drug development costs are increasing annually and there is a great demand for automation which greatly reduces labor costs.

Existing automatic synthesis equipment

✗ Expensive ✗ Complex and hard to use ✗ Imported

Jointly developed with
4 pharmaceutical companies
and the Nard Institute!

Overcome the issues of existing automatic synthesis equipment with

OptimFlow



Equipment configuration

Configured in a maximum of 4 lines.
(3-stage reaction with 4 channels
and 3 reactors)

Sampling line systems

Sys A: Manual sampling (Reagent is manually introduced to the loop. Measured using the IV)

Sys B: Automatic sampling using the SP (channels switched using the 4VS/4VL)

Sys C: Multiple types of sample synthesis are possible using the LH.

→ Equipment Overview



Automated synthesis without manual calculation

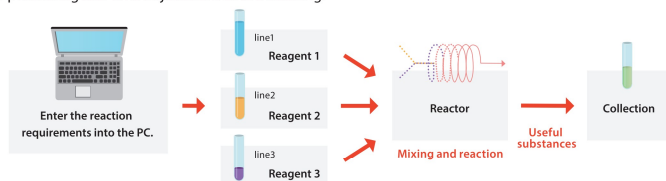


Intuitive synthesis software



Supports a maximum of 4 channels and 3 reactors

- Load the reagent and start up the synthesis software to automatically conduct everything from the required pre-processing and time adjustment to the cleaning.



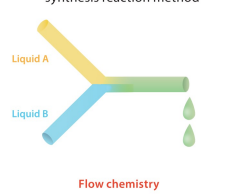
- Just input the conditions, such as the reagent concentration, ratio, and reaction time and then apply the flow synthesis. (No calculations are required.)

Conventional organic synthesis reaction method



Batch method

Next-generation organic synthesis reaction method



Flow chemistry

Flow chemistry for all chemists

- Our software is easy for chemists to use.
- It does not require calculations, process engineering, or programming.

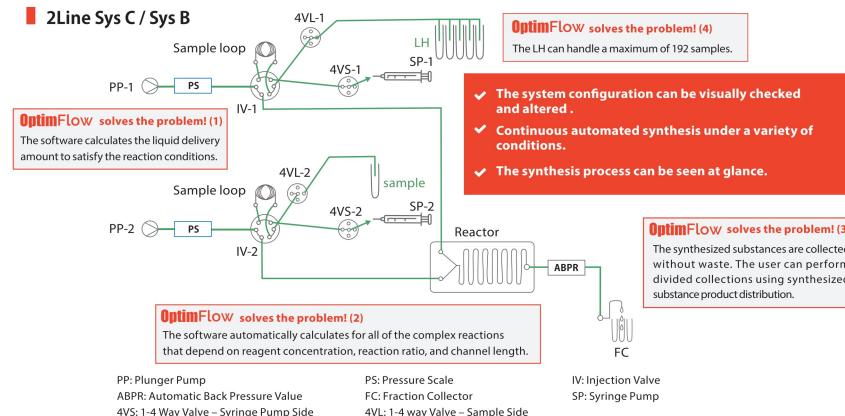


Conventional flow chemistry equipment required a ton of knowledge and know-how, making it challenging for researchers specializing in organic synthesis.

The equipment must be controlled based on the calculated values, but this is very complex.

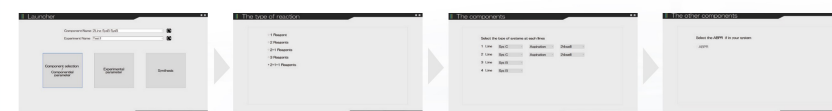
With our new equipment, you only need to do is enter the reaction requirements and the software takes care of all the complex calculations.

2Line Sys C / Sys B



Intuitive software (First half: Synthesis pattern selection)

- Follow the navigation to select the flow synthesis type.



1. Launcher

- Componental Parameter input
- Experimental Parameter input
- Start the synthesis program

2. Componental parameter Reaction type

- Select the reaction type (number of lines/number of reactors)

3. Componental parameter Components

- Select the system (SysA/SysB/SysC) for each line.

4. Componental parameter Other components

- Select the components of the ABPR, etc