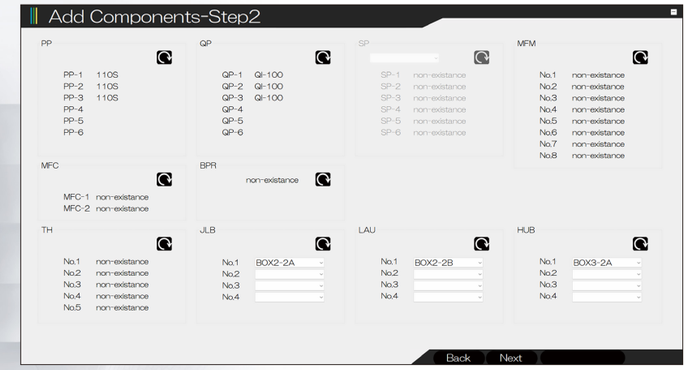
Compatible with External Device Integration

AltaFlow is designed to flexibly accommodate a variety of system configurations through integration with external devices. With a proven track record of connecting to third-party devices, AltaFlow offers excellent expandability and system integration capabilities.



Device Integration Control Panel

List of Device Integration Examples

Pumps	DFC	FC-F/RP Series	Temperature Controllers	DFC	FC-TH Series Column Heater Uni
	TACMINA	Q Pump Series		Julabo	CORIO CD Series DYNEO DD Series
	YMC	YSP Series		YMC	Coil Reactor Unit Column Reactor Unit
	Harvard	PDH ULTRA CP Series			Mixing Block Unit
	Fuji Techno Ind.	SMP Series		LAUDA	Circulating Constant Temperature Bath PRO Series, etc.
	Bronkhorst	miniCORI-FLOW Gear Pump			
Mass Flow ontrollers	KOFLOC	EX-250 Series	Sensors	DFC	Inline Temp. Sensor, Pressure Sensor
	Bronkhorst	F-201CV / F-211CV Series		Bronkhorst	miniCORI-FLOW
Electrochemical Reactors	EC FRONTIER	ECSTATsyn-700Dx		Surpass Ind.	NTF Series

*If you are considering integration with other external devices, please feel free to contact us.

Configuration Example / Price & Specifications

	4 Line	2 Line	3 Lines (with gas-liquid reaction and temperature control add-ons)
Plunger pump	4	2	2
Reagent switch	4	-	2
Back pressure	1		
Fraction collector	1		
Mass flow	-		1
Tube heater	-		1
Main box	1		
Sub box	-		1
Software	4	2	3
Size	W870 × D500 × H600 mm	W800 × D350 × H600 mm	W870 × D600 × H600 mm

	Specification
Flow Rate Setting Range (PP)	0.01 – 99.999 ml/min
Pressure Setting Range (ABPR)	0.1 – 5.0 MPa
Fraction Collector (FC)	Selectable: 50 tubes (10 ml), 18 tubes (50 ml), or 10 tubes (110 ml)

*The above prices are for reference only and may vary depending on the system configuration and unit specifications.

DFC Device for Flow Chemistry

DFC Co., Ltd. Device for Flow Chemistry

611-0033 Uji Venture Business Incubation Factory (Uji VFI) Building 2
1-25 Nishinohata, Okubo-cho, Uji-shi, Kyoto
E-mail. info@dfc-kyoto.co.jp

https://dfc-kyoto.co.jp

Business Description
- Development and sales of laboratory equipment

Fields of Expertise
- Flow chemistry
- Liquid chromatography and HPLC
- Laboratory equipment for other applications

2025.08

DFC
Device for Flow Chemistry

AltaFlow

Automated Synthesis System for Process Development

PRODUCT OVERVIEW

Automated Synthesis System for Process Development

AltaFlow

AltaFlow was developed based on the expertise gained through OptimFlow.

FEATURES

- Supports manual synthesis and third-party device integration
- Measurement device integration based on user requirements
- Up to 4 reagent bottles selectable per line

01 System Overview and Synthesis Process

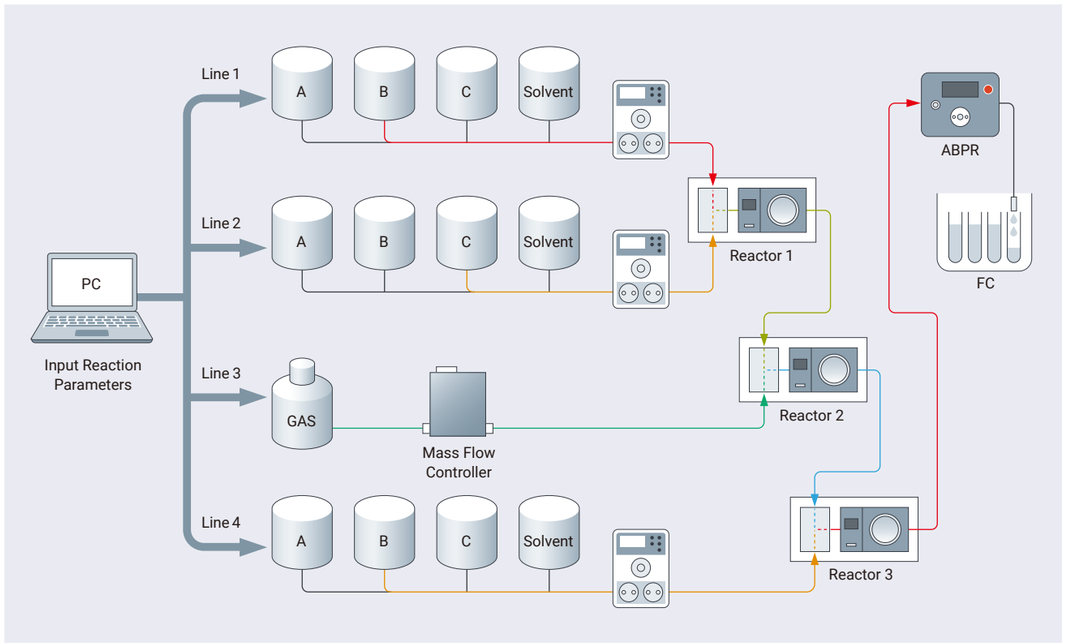
System Overview

Equipped with user-friendly synthesis software

Enables synthesis with up to 6 lines and 5 reactors (5-step reactions)

Synthesis Process

Each line selects one sample (reagent) from 3 to 4 types and performs synthesis in the reactor.
Any line can also be configured for mass flow control.



02 Outstanding Features of AltaFlow

1 Users can specify detailed experimental parameters by selecting either [Flow Rate] or [Residence Time].

Synthesis conditions can be configured based on your needs using either [Flow Rate] or [Residence Time].

- Flow Rate (ml/min)
- Residence Time
- Reagent Concentration
- Molar Ratio of Reagents

Flow Rate Line-1 (mL/min)	100.000	100.000	100.000	100.000	100.000	100.000
Flow Rate Line-2 (mL/min)	1.000	1.000	1.000	1.000	1.000	1.000
Flow Rate Line-3 (mL/min)	1.0	1.0	1.3	1.0	1.0	1.0
Residence Time(min)	0.01	0.01	0.01	0.01	0.01	0.01
Conc Of Reagent 1 (M)	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Conc Of Reagent 2 (M)	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Conc Of Reagent 3 (M)	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
MolRatio of Reagent 1	1.000	1.000	1.000	1.000	1.000	1.000
MolRatio of Reagent 2	1.000	1.000	1.000	1.000	1.000	1.000
MolRatio of Reagent 3	1.000	1.000	1.000	1.000	1.000	1.000

[Flow Rate]
Synthesis is performed by setting the flow rate.

[Residence Time]
Synthesis is performed by calculating the flow rate based on the residence time, reagent concentration, and molar ratio.

2 Limit settings allow the system to trigger a [Warning] or [Stop] in response to detected abnormalities.

Upon detecting an abnormal condition, the system can be configured to either issue a [Warning] or initiate a [Stop].

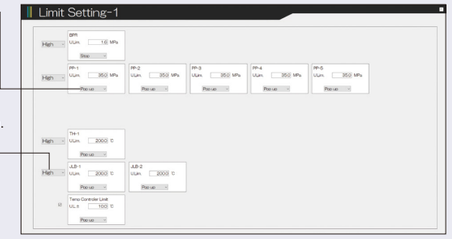
Settings / Parameters

- Pop up: Warning: The system does not stop automatically but displays the error message on screen.
- Stop: Stop: The error message is displayed on the screen, and the unit stops operation.

Sensitivity Parameter

High	Immediate
Mid	5 seconds
Low	10 seconds

You can choose from three levels



Limit Setting Screen

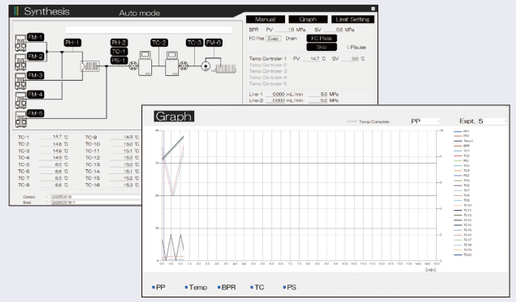
3 Enables manual synthesis and the logging / display of detailed graphs.

Supports manual synthesis

Manual control of each unit's ON/OFF status and parameter settings is available, allowing synthesis to be carried out.

Data Logging and Graph Display

The system logs synthesis data (e.g., flow rate, back pressure, liquid temperature) and visualizes it in real-time graphs. Selecting "Reload" allows you to refresh and view the latest graph data during operation.

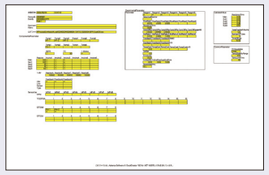


03 Support Functions of AltaFlow

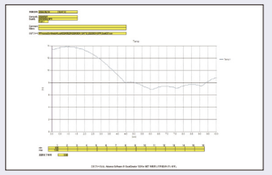
Automatic Report Generation

After synthesis is completed, the system automatically generates a report using the collected data and exports it as a PDF.

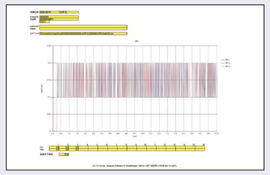
■ Generated Reports (The number of reports may vary depending on the system configuration)



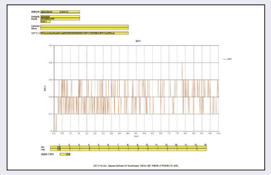
Basic Information



Liquid and Gas Delivery Graphs



Temperature Graph



Back Pressure Graph