

## Discovery chemistry system



**For limited quantities of starting material or expensive reagents, Asia Discovery Chemistry Systems offer setups capable of running flow experiments using very small amounts of reagents.**

Users can design a list of experiments, each requiring just hundreds of microliters of reagents, and run them in sequence. Using a range of modules, the system will automatically inject the required amount for each reaction and collect the resulting solution in a small vial.

	Regular	Advanced
Flow rate	1.0 $\mu$ L/min to 10mL/min*	
Pressure (bar)	0 to 20bar	0 to 20bar**
System temp. ( $^{\circ}$ C)	-15 to +150	-100 to +250
Pump channels	2	4
Chip reactors	✓	✓
Tube reactors	✗	✓
Column reactors	✗	✓
Electrochemistry	✗	✗
FLUX volume	N/A	N/A
Product collection	AUTO	AUTO
Aqueous work-up	✗	✓
Pressurized inputs	✓	✓
Injection valves	2	4
Auto injection valves	✗	2
Analysis interface	✗	✗
Automation	✓	✓

\* Depending on the syringe size.  
 \*\* 10 bar when using fluoropolymer tube reactors.  
 ^ Depending on cooling solution.

# Modules

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## Pressurized Input Store

Pressurizes four bottles with an inert gas enabling the use of air sensitive reagents and eliminates cavitation when pumping. Input pressure 1-10 bar, output pressure 1 bar.

## Auto RIM

Includes two independent chemically resistant channels allowing reagents stored in racks of septum capped vials to be automatically aspirated and loaded into injection loops.

## Reagent Injector

2 extremely chemically resistant injection valves with sample loops. 0.1ml, 1ml, 5ml or 10ml, manual or automated control, 0 to 20 bar. Ideal for rapid reaction optimisation.

## Heater and Chip

This module has adaptors that can be changed in seconds to heat the full asia range of reactors. Temperature range from room temperature to 250°C.

## FLLEX

The Flow Liquid Liquid EXTRACTION (FLLEX) offers continuous flow aqueous work up. Internal volume 100µl. FLLEX can be used anywhere within the flow setup.

## Pressure Controller

Automatically pressurizes the reaction up to 20bar (300psi) for ultra-fast reaction rates and control of gas/liquid reactions.

## Automated Collector

Allows automated collection of multiple reactions in separate vials or vessels. Waste is automatically diverted.

## Asia Manager Software

Easy to use for total 'walk-away' control of the Asia System.

## Syringe Pump

Extremely chemically resistant continuous flow pumps for ultra smooth flow. Flow rate from 1µl/min to 10ml/min each, 20 bar, pressure sensor.

## Cryo Controller

Rapidly cool a selection of fluoropolymer or stainless steel tube reactors to -70°C or a range of glass or quartz microreactors to -100°C. Requires only mains power, no need for cryogenic media.

## Sampler and Dilutor

Enables on-line reaction analysis by automated sample extraction, dilution and transfer to an analytical system e.g. LCMS or UPLC. Dilution factor: 5 to 250.

## FLUX - Flow Electrochemistry

Enables a wide range of electrode materials to be changed in seconds. No tools. Includes a power supply and electrochemical flow cell with minimal electrode gap. Internal reaction volume 225µl.

## Chip Climate Controller

Enables glass microreactors to be cooled or heated from -15°C to +150°C - no need for circulator or cold water supply.

