

Tube-In-Plate Reactors

For flow reactions where static mixing is not required

User rewindable tubing, simple recovery from blockages



Asynt Flow **Tube-In-Plate (TIP) Reactors** are a unique reactor design for synthetic chemistry that needs efficient heat transfer. Narrow bore FEP tubing is embedded in channels cut into an aluminium block, giving a high surface area for good thermal transfer. FEP has very good light transparency, making the single-sided UQ5203 ideal for photochemistry. A glass cover plate helps to stabilise the internal temperature and, with the FEP tubing, lets you see what is going on inside.

Glass static mixer (GSM) reactor blocks are very effective flow reactors, but they can be harder to clean if they become blocked or contaminated. With a TIP reactor, the glass cover plate can be easily removed so the tubing can be rewound or replaced by the user. Where static mixing is not needed, a TIP reactor is also a lower cost option than a GSM.

Part No.	Description	Internal volume	Photochemistry
UQ5203	Tube-In-Plate Reactor, FEP	7.5 mL	Suitable
UQ5204	Double-Sided Tube-In-Plate Reactor, FEP	12 mL	Not suitable

- **Ideal for photochemistry:** FEP tubing has very good light transparency (UQ5203).
- **Visible reaction:** the glass cover plate and FEP tubing let you see what is going on.
- **Compatible:** HotChip and ColdChip modules; PhotoChip with UQ5203 only.
- **High surface area:** good thermal heat transfer from the aluminium block.
- **User rewindable:** tubing can be rewound or replaced if it becomes blocked.
- **Lower cost:** compared with GSM reactor blocks, where static mixing is not needed.

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A practical, cost-effective reactor for flow and photo-flow chemistry.



Control Your Tube-In-Plate Reactor

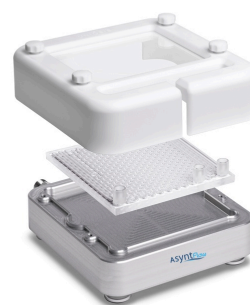
Heating, cooling and photochemistry modules

Expand your flow chemistry reactor system

ColdChip

Flexible standalone heating and cooling module for GSM and TIP reactors

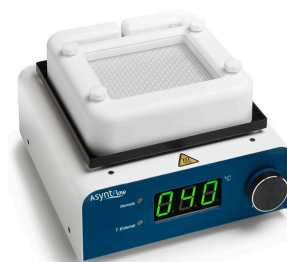
A standalone temperature-controlled reactor module that, when connected to a suitable external circulator, is designed to maintain stable temperatures between $-80\text{ }^{\circ}\text{C}$ and $150\text{ }^{\circ}\text{C}$ for extended periods. It has no internal electronic control components, so it can be readily added to an existing flow system, and several units can be connected in series. It accommodates one Tube-In-Plate reactor, one LARGE format GSM or two COMPACT format GSMs.



HotChip

Standalone heating module for GSM and TIP reactors

A versatile standalone heater module that is compatible with Tube-In-Plate reactors and LARGE format GSMs. Temperature range: ambient to $230\text{ }^{\circ}\text{C}$.



PhotoChip

Temperature-controlled LED photoreactor for GSMs and the UQ5203 TIP reactor

A standalone, high power, temperature-controlled photoreactor module with an LED array positioned above an interchangeable GSM or UQ5203 Tube-In-Plate reactor. The double-sided UQ5204 is not suitable for photochemistry.



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Contact us to discuss how these systems would benefit your flow chemistry

