

CORNING

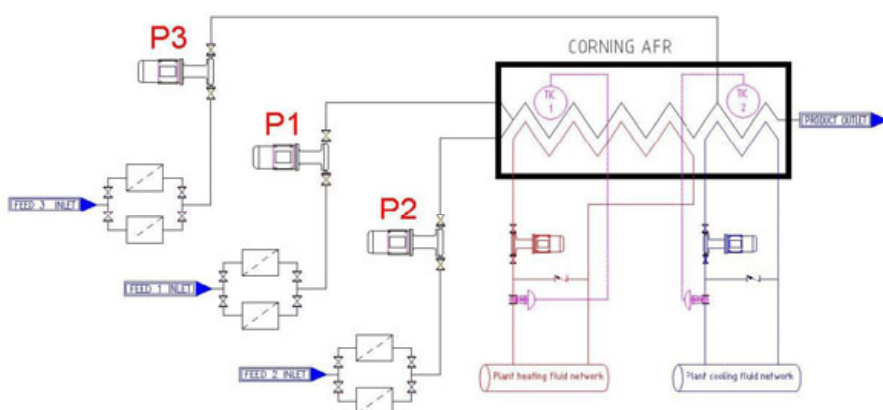
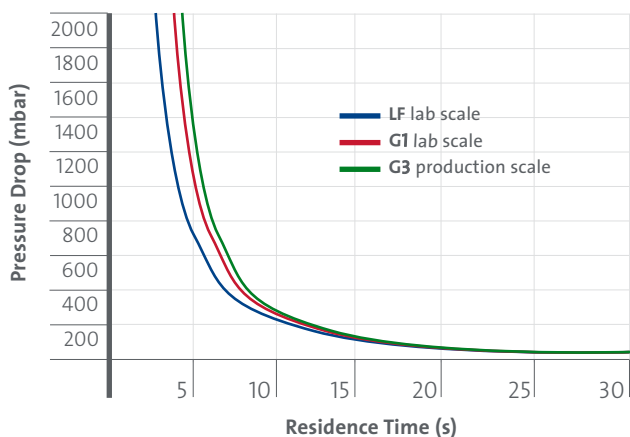
The future flows through Corning® Advanced-Flow™ reactors

Corning® Advanced-Flow™ G3 Reactor

A seamless and direct solution from lab to production

Corning has developed a high-flow-rate reactor for chemical production that retains the outstanding mixing and heat exchange performance of its lower-scale Advanced-Flow™ reactors while also providing:

- Large internal volume
- High flexibility
- Metal-free reaction path
- Scalability: Throughput factor increase of > 10 from G1 to G3
- Processing capability up to 100 kg/h

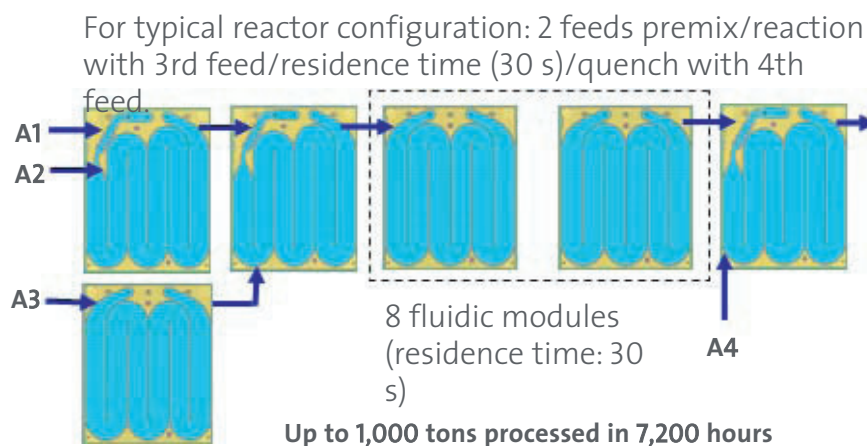


Integration of Corning® Advanced-Flow™ G3 Reactor in Production Plant

Example of Processing Capability

Reactor Characteristics	
Total pressure drop Process path (Approx.) (barg)	5 (*)
Total pressure drop Heat exchange path (Approx.) (barg)	2 (**)
Total internal volume (Approx.) (L)	0.8

(*) water 20°C, 100 kg/h total flow rate
 (**) water 20°C, 1500 kg/h total flow rate



Reactor Elements

The G3 reactor is composed of borosilicate glass fluidic modules, PFA piping, perfluoro-elastomer gaskets and a full stainless steel frame compatible with the chemical production environment.

Boundary Conditions

Operating Range	Process Path	Heat Exchange Path
Temperature (°C)	-60 up to 200	-60 up to 200
Pressure (barg)	Up to 18	Up to 6

Various Fluidic Module Designs Available

Mixing Designs	Residence Time Designs
1 injection zone to contact 2 reactants and Residence time Heat exchange integrated	Residence time or Pre-heating/cooling Heat exchange integrated

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