

# Optional accessory for Tandem and Single $\mu$ -Reactors

## High Pressure Flow controller; HP-3050FC

### MAJOR FEATURES

#### 1) Online High pressure (HP) reaction analysis by innovative pneumatics

A new flow system permits ideal online monitor and analysis of reaction. Maximum pressure up to 3.5 MPa (500 PSI).

#### 2) Retention times in GC/MS unchanged at any catalysts pressure

Catalyst reaction products can be monitored online through GC/MS analysis that can be performed at any desired reactor pressure and temperature (within set points).

#### 3) Easily upgradable from Tandem and Single $\mu$ -Reactors

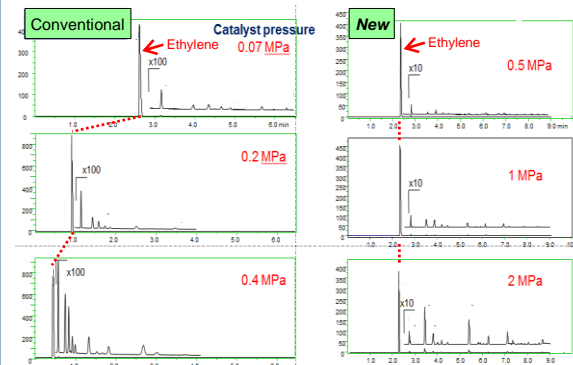
Using this optional, Tandem and Single  $\mu$ -Reactors can be easily upgraded to HP Tandem  $\mu$ -Reactor.

#### 4) Analysis of liquid and solid samples

Liquid samples can be injected using a micro syringe and solid samples can be introduced with the supplied high pressure solid sampler.

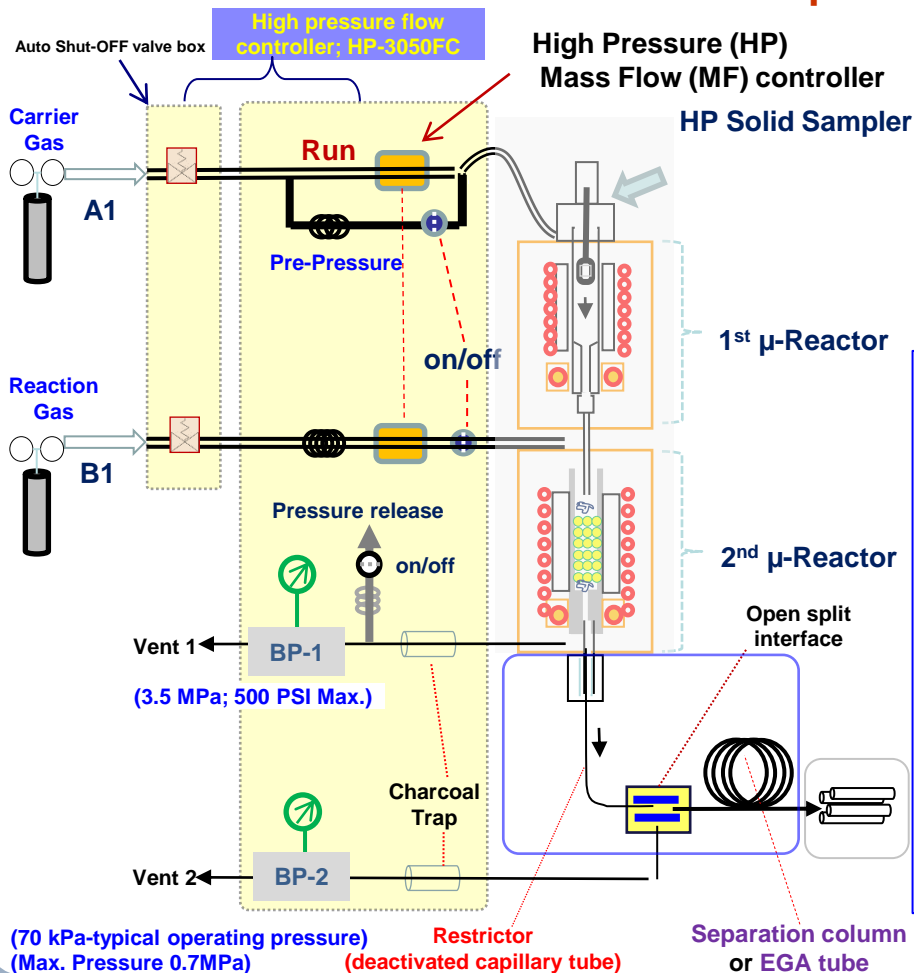
*Retention times stay unchanged at different catalyst pressures*

#### Online monitoring High Pressure Reaction



Catalyst: H-ZSM-5 at 250°C, He: 100 ml/min, Split ratio: 1/100, Ethanol 1 $\mu$ L, FID, UA1-30M-2.0F, 30 (4min)-@20-230°C  
All data were obtained in USA.

### Innovative Pneumatics of HP Tandem $\mu$ -Reactor System



High pressure flow Controller; HP-3050FC

#### Specification;

- Max pressure; 3.5 MPa
- High pressure solid sampler
- Pressure: Digital display
- Open split interface with restrictors:
- Flow rate: 10-200 ml/min
- Pressure: 0.5-3.5 MPa
- Safety: Auto Shut-OFF valves for carrier and reaction gases.  
(Safety; low and high pressure limiter)
- AC 100/240V, 30 W

#### User preparation;

- Carrier and Reaction gases
- Pressure regulator;  
(2<sup>nd</sup> regulator indicates up to 5 MPa)

\* Auto-Shot Sampler and Selective Sampler are not compatible with High-Pressure Flow Controller HP-3050FC.



**FRONTIER LABORATORIES LTD.**

Visit our website for the latest information  
[www.frontier-lab.com](http://www.frontier-lab.com)