



# titan

continuous processing  
scale-up

Distributed by:

**Lab Unlimited**  
CARL STUART GROUP

Tallaght Business Park  
Whitestown, Dublin 24,  
Ireland  
D24 RFK3

Tel: (01) 4523432  
Fax: (01) 4523967  
E-mail: [info@labunlimited.com](mailto:info@labunlimited.com)  
Web: [www.labunlimited.com](http://www.labunlimited.com)

Quatro House, Frimley Road,  
Camberley,  
United Kingdom  
GU16 7ER

Tel: 08452 30 40 30  
Fax: 08452 30 50 30  
E-mail: [info@labunlimited.co.uk](mailto:info@labunlimited.co.uk)  
Web: [www.labunlimited.co.uk](http://www.labunlimited.co.uk)

## » from lab scale



### Laboratory Scale

Titan modules can be arranged to form smaller systems, ideal for development of a chemical process at the lab scale.

Our bench-top framework enables a wide range of Titan modules to be assembled on a lab bench or inside a standard fume cupboard.

## » specifications

**Reactor volumes:** 64 mL and 250 mL reactors can be added in series to cover a wide volume range

**Production rates:** Output suitable for laboratory, pilot plant and manufacturing environments

**System flow rates:** 1 mL/min to 1 L/min

**Pump flow rates:** 1 mL/min to 250 mL/min

**Pressures:** Up to 20 bar

**Temperature range:** -40°C to 250°C

**Types of processes:** Suited for both fast reactions with high mass transfer and heat transfer requirements, and slow reactions. Designed for use with multiple phases

**Chemical compatibility:** Glass, fluoropolymers, Hastelloy, and Elgiloy wetted parts

**Automation:** Control process parameters from the modules, via Titan software, or via pre-existing PLC or plant software

**Safety:** Interlocks, anti-tamper, pressure detection, and auto shut down features