

March 2014

*... enabling distributed manufacturing*

## DN15 RANGE

NiTech's unique new DN15 range of reactors and crystallisers offers manufacturers a flexible and versatile way to enhance product quality, reduce costs and minimise waste and energy use.

The DN15 can complement existing production at any scale – from the lab right through to commercial production - bringing step-change improvements. The continuous processing reactors and crystallisers are also the perfect solution for any company considering distributed manufacturing. This is why several manufacturers, including some chemical majors, have already chosen the DN15 for new projects.

The portable and modular unit is an excellent tool for different and multiple chemistries. Applications exist in a wide variety of industries including chemicals, pharmaceuticals, biofuels and food & drink products.

The first phase of the DN15 range is available in three models: Lite, Standard and Plus. All models are continuous oscillatory baffled crystallisers and reactors with the following operational parameters:

- Temperature range: 0 °C to 100 °C
- Oscillator frequency: 0 Hz to 3.0 Hz
- Oscillator amplitude: 0 mm to 70 mm
- Operating pressure: ambient – 2.0BarG

The **DN15-Lite** has a volume of 1250 mL and is 7m long, with jacketed straights. It is easily upgradable to the DN15-Standard.

The **DN15-Standard** has a volume of 2500 mL and is 14 m long. Both straights and bends are jacketed.

The **DN15-Plus** has a volume of 3500 mL in volume and is 20 m long. Both straights and bends are jacketed.



**CHOOSE CONTINUOUS – CHOOSE NITECH**

*... enabling distributed manufacturing*

©2014 NiTech Solutions

Email: [sales@nitechsolutions.co.uk](mailto:sales@nitechsolutions.co.uk) Website: [www.nitecholutions.co.uk](http://www.nitecholutions.co.uk)

## DN15 - Safer, **Greener**, Faster ..... and Cheaper

- Closer and simpler process control, plus reduced inventories of un-reacted hazardous materials, enhance **SAFETY**
- Reduced energy and waste generation plus improved efficiency result in a **GREENER** manufacturing process
- Quicker reaction times, simpler product change-over and a modular/portable design for local manufacturing allow a **FASTER** response to volatile market needs
- Lower capital, operating and maintenance costs - as well as a lower space requirement - mean a smaller manufacturing footprint and **CHEAPER** operating cost

*Many industries are now moving towards continuous processing because of its significant and proven advantages*

### REACTOR BENEFITS

Mass/heat transfer constraints are moved and overall reaction times are reduced dramatically. Better conversion equals higher yields. Able to handle liquids, solids and gases. Simple product change-over, enabling lower inventories and different size runs.



### CRYSTALLISER BENEFITS

Unparalleled and unique ability to produce solids with a uniform size and distribution. Crystallisation time is reduced and scale-up is linear with constant parameters, meaning that lab-scale production is virtually commercially proven.



**CHOOSE CONTINUOUS – CHOOSE NITECH**

*... enabling distributed manufacturing*

©2014 NiTech Solutions

Email: [sales@nitechsolutions.co.uk](mailto:sales@nitechsolutions.co.uk) Website: [www.nitechsolutions.co.uk](http://www.nitechsolutions.co.uk)