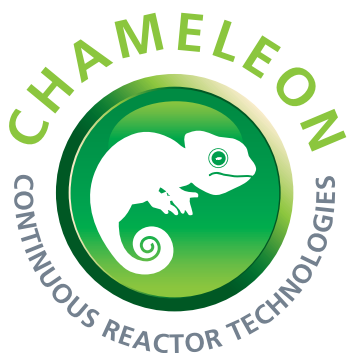


Chameleon Adaptable Reactor Technology

For your Continuous and Batch Chemistry Needs



Users of Continuous and Batch Processing now have an affordable Lab Scale, “off the shelf” system to fully investigate the best alternatives for their Chemistry.

Our Chameleon is a flexible, versatile reactor system that can readily adapt to your environment! If you are looking for a small volume, multi vessel system that can be used for either Batch or Continuous Chemistry, then look no further than the Chameleon Adaptable Reactor.

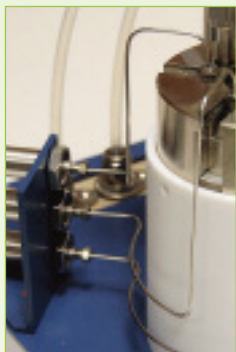
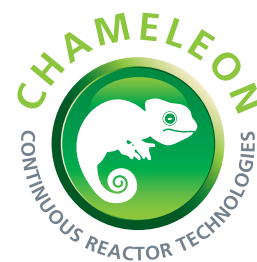
Overview

- Easily adapts to continuous or batch chemistry
- Suitable for liquid and gas-liquid chemistries
- Truly lab scale
- Excellent temperature and pressure capability
- Accommodates on-line analysis tools
- Compact and easy to install - suitable for every laboratory





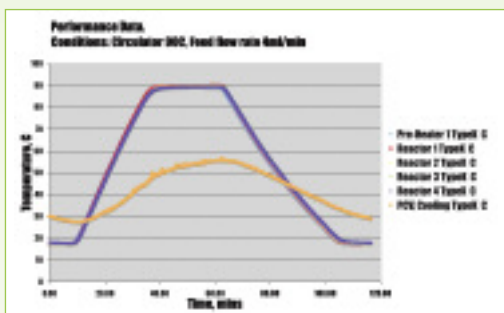
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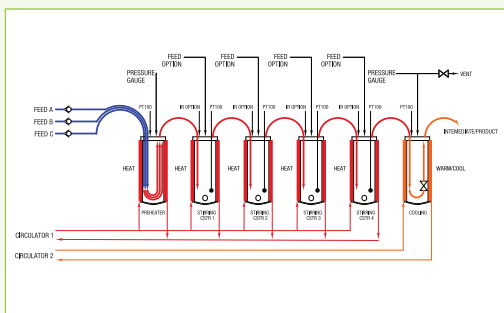
Continuous Mode



Batch Mode



Temperature Control



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Continuous Mode

In continuous mode, up to 4 reactors can be connected in series offering the user a mixed reactor platform, a series of CSTRs (plug flow) for continuous processing. A Preheat Mixing Station allows reactants to be brought to the desired temperature. A Cooling and Pressure Control Station allows regulation of the upstream pressure and cooling prior to depressurization to avoid solvent boiling. The outlet stream can be collected as a final product or be used as an intermediate in a subsequent reaction.

Batch Mode

In batch mode, the user can charge and operate up to 4 reactors in parallel to build a database for comparing and optimizing operating conditions. For example, the user can design experiments to:

Optimize reactions – each reactor can be run with different operating conditions such as temperature and pressure making the Chameleon ideal for rapid reaction optimization.

Check reproducibility – the control of parameters allows you to run identical reactions to measure reproducibility.

Assess robustness - the Chameleon has the control and flexibility in operating parameters that you need for a statistically designed DoE approach.

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Our Chameleon system offers a wide range of configurations. As well as switching between continuous and batch mode, you can easily change:

- The number of reactors and the reactor volume (5 - 20 ml).
- The temperature.
- The total pressure.
- The contacting patterns for various combinations of high and low concentrations of reactant.

Our systems may be manufactured with wetted parts in either 316-Stainless Steel or Hastelloy™ C276, so a range of reactions can be studied without fear of corrosion or contamination. There is opportunity to analyze the reaction using on-line analytical tools e.g. in-situ FTIR, for process understanding and control purposes.

No special facilities are required - the Chameleon footprint is small, suitable for installation in a standard fume cupboard with extraction, services and fail-safe power already in place.

If you would like to speak to a technical representative please call us on +44 (0) 1954 252522, e-mail sales@crduk.com, or alternatively you can visit www.crduk.com for further information.