



Bateman Pulsed Columns

Bateman Litwin's Advanced Technologies Division provides state-of-the-art solvent extraction know-how and technologies.

The Bateman Pulsed Column (BPC) is a highly efficient cost-effective contactor which enhances solvent extraction (SX) during extraction, stripping and scrubbing or washing processes.

Advantages of the BPC

- Continuous and multi-stage extraction process
- Handling of liquids with suspended solids
- A safer and more environmentally friendly process
- Free from moving internal parts
- A fully automated system
- Lower maintenance and operating costs
- Dramatically reduces floor space needs

Applications of BPC

Bateman Pulsed Columns can enhance most industrial SX processes, particularly those with a fast rate of mass transfer.

- Minerals processing: uranium, nickel, cobalt, zinc, titanium
- Chemical industry: nitric, phosphoric and hydrochloric acids
- Environmental protection: recovery of nitrates, sulfuric acid, cyanides, and halides
- Additional applications include pharmaceutical, food and petroleum industries

Bateman Litwin's Test and Design Capabilities

The BPC technology is backed up by Bateman Litwin's comprehensive range of services, starting with bench scale exploratory tests through to pilot scale test work, culminating in the design, construction and commissioning of full scale solvent extraction plants. An essential component of this service is the experience of Bateman Litwin engineers in the field of solvent extraction and access to pulsed column pilot plants.

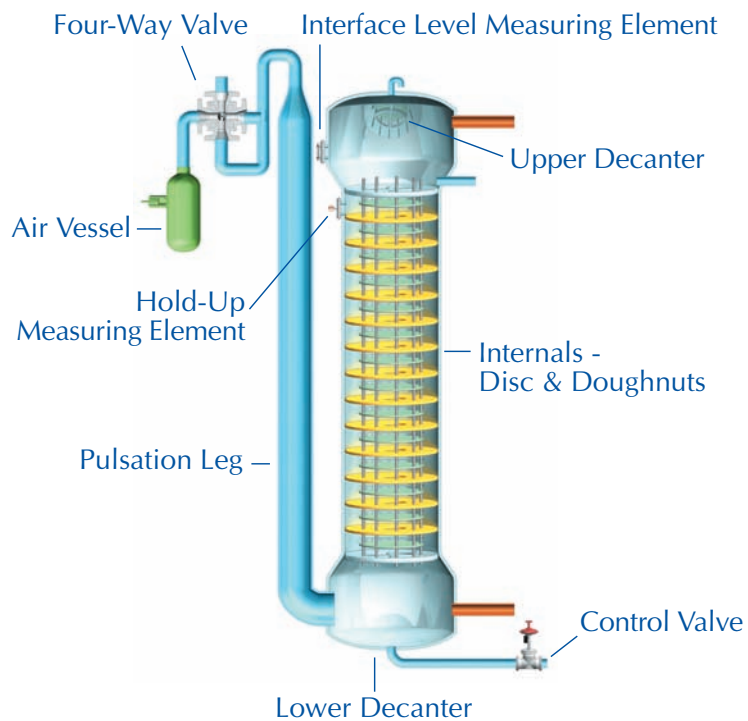


How the BPC Works

A Bateman Pulsed Column consists of a large diameter vertical pipe filled alternatively with disc & doughnut shaped baffles which facilitate contact between the immiscible liquids as they pass through the column.

The heavy (aqueous) phase enters through a disperser at the top of the column and the light (organic solvent) phase enters through a similar device near the bottom. A decanter at each end of the column permits the liquids to coalesce and be decanted separately. When the solvent phase is continuous the interface between the phases is in the lower decanter and when the aqueous phase is continuous, it is in the upper decanter.

The columns are pulsed by blowing air at the required amplitude and frequency of the pulses which are controlled using four-way solenoid valves.



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Regional offices:

Chile, Italy, Kazakhstan,
Morocco, Nigeria,
Russia, Romania,
Slovakia, Switzerland,
the Middle East, USA

Selected Projects

- Olympic Dam Operations, Australia, **Uranium SX** plant
- WengFu, China, **Purified Phosphoric Acid SX** plant
- Goro Nickel, New Caledonia, **Nickel/Cobalt SX** plant