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Crystallization, Separation, Purification

[www.armstrong-chemtec.com](http://www.armstrong-chemtec.com)  
Heat transfer specialists



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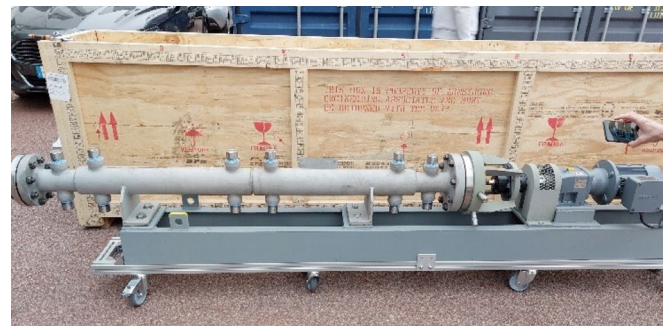


# NEW LAB SCALE EQUIPMENT FOR SEPARATION AND PURIFICATION OF YOUR PRODUCT

## Continuous crystallization

### The advantages of continuous crystallization

- Improved reproducibility
- Lower energy consumption
- Less operator attention



*Small scale Scraped Surface Crystallizer for early stage process development*

### Benefits of Scraped Surface Crystallizer (SSC)

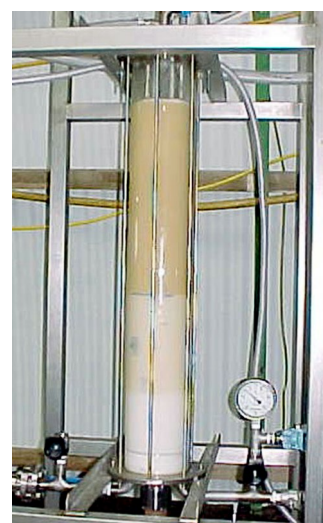
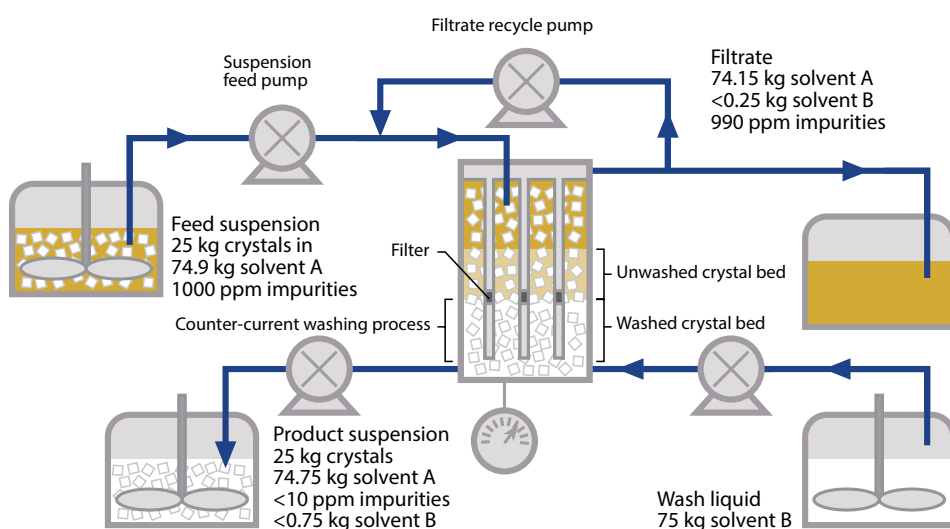
- Large surface to volume ratio enabling high cooling capacity with improved control.
- Multiple coolant jackets to create dedicated cooling profiles.
- Rotating scraper blades to prevent deposits of solids on the wall, and improve heat transfer and mixing.
- The SSC was used successfully for cooling crystallization of an API from a solvent, currently design of full scale unit is being made.

### What we can offer

- Rental of small Scraped Surface Crystallizer.
- End of 2022, skid-mounted, turnkey unit with 2 small Scraped Surface Crystallizers available for rental or tests at SoliQz premises.

# SOLVENT SWITCH HYDRAULIC WASH COLUMN

## From pure crystals to a pure product



Schematic flow diagram for a process with a Solvent Switch Hydraulic Wash Column and photo of pilot plant with 15 cm diameter solvent switch HWC during the washing of carnalite ( $\text{KMgCl}_3 \cdot 6\text{H}_2\text{O}$ )

### Benefits of the Solvent Switch Hydraulic Wash Column

- Extremely high washing efficiency at a very low wash liquid consumption (see example above for eutectic impurities).
- Concept that is proven on pilot scale
- End product in different forms: clean suspension, solution or wet/dry crystals (with additional equipment).
- Innovative way of transferring crystals from one solvent into another in multi-stage processes and/or improve product purity after final crystallization step.

### What we can offer

- Process development support to individual clients.
- Partnership in a multi-client project for testing Solvent Switch HWC.