GREEN CHEMISTRY

Equipment overview:

Glass-lined, pressure-proof, jacketed, agitated and corrosion-resistant reactors, coupled to a condenser and vacuum pump.

Reactor volumes (ATEX):

- 1 x 20 L (ATEX, Hastelloy, pressure 0.060–10 bara, up to 160°C)
- 1 x 85 L (ATEX, stainless steel, pressure 0.050–9 bara, up to 165°C)
- 1 x 250 L (ATEX, stainless steel, pressure 0.050–7 bara, up to 100°C)
- 1 x 500 L (ATEX, glass lined, pressure 0.050–9 bara, up to 180°C)
- 1 x 1000 L (ATEX, glass lined, pressure 0.050–5.4 bara, up to 165°C)
- 1 x 5400 L (ATEX, glass lined, pressure 0.050–5.4 bara, up to 165°C)

Auxiliary equipment (ATEX):

- Disc stack centrifuge: liquid-liquid or 3 phase separator, ca. 12000 g, max. 2.5 m³/h
- Filter dryer 1900 L for solvent extraction, (pre-coat) filtration and solids drying
- Chamber filter press: cake vol. 100 L, max. 7.7 m² filtration area, cake squeezing
- Karr column (ca. 6 L/h) for counter current liquid-liquid extraction
- Dead-end plate and frame filters
- Bag filters
- Columns for ion exchange, adsorption chromatography or activated carbon treatment (see product recovery and purification folder)

What we offer:

ATEX compliant installation and expertise for chemical processes:

- Solvent evaporation and condensation
- Zoning of the operational area to ATEX zone 2
- Explosion protection on all electrical equipment: ExII2G T3
- Nitrogen inertisation and blanketing

Types of processes:

- Chemical synthesis reactions
- Chemical conversion reactions
- Chemical hydrolysis
- Extractions
- Flocculation

Expertise:

ATEX zoning challenges the possibilities and freedom of operation. However, our team of experienced engineers and operators can always find a safe and workable approach. Our team is ready to bring your product to the next scale.

Examples:

- Functionalisation of biopolymers and oligosaccharides
- Esterification of fatty acids
- Synthesis of oleochemicals
- Chemical synthesis of biosurfactants

For more information: please visit www.bbeu.org
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