

Example Units



Pilot Hydrotreater

2 parallel trickle flow reactors (1.5m, 5cm i.d.) for hydrotreating and hydrocracking with integrated atmospheric and vacuum distillation of products.



Glycerol Upgrading

Micro pilot scale fixed bed reactor for glycerol upgrading. Automated calculation and monitoring of mass balance. 400°C, 100 bar.



Automotive Testing

3- parallel monolith testing units for DeNOx and diesel particle filter testing, with the facility to age the catalyst in situ. Maximum gas flow 300l/min.



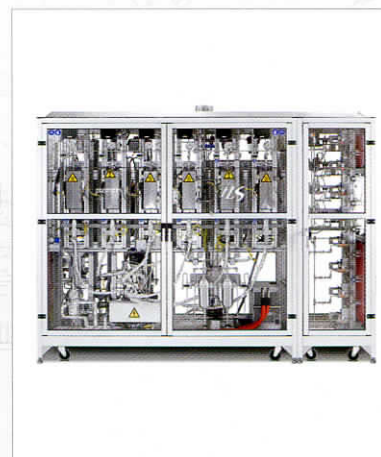
Fixed Bed FT

Lab scale 4-parallel fixed bed Co-Fischer Tropsch unit with fully independent gas composition, temperature and pressure in each reactor. 550°C, 70 bar.



Eggshell Catalyst Testing

7-fold units with Temkin reactors for testing of eggshell type catalysts. Current applications include C₃ partial oxidation and VAM monomer synthesis.



Partial Oxidation Workflow

Workflow for partial alkane oxidation with 6 parallel screening reactors and 2 fully independently controllable kinetics reactors. 2 online GCs integrated. 800°C and 10 bar.

Example Units



Supercritical CO₂ Workflow

scCO₂ workflow consisting of 10-parallel synthesis reactors, 24 parallel testing reactors, 1 reactor with view window for phase diagram generation and 1 fixed bed flow reactor for lifetime testing.



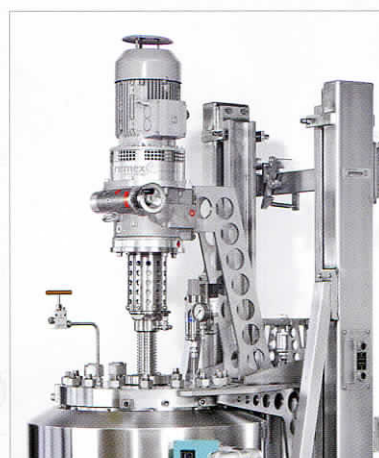
Hydrogenation and Amination

Micro-pilot scale 1l semi-continuous autoclave with H₂ compressor, liquid ammonia dosing, automated hydrogen dosing and uptake monitoring, and liquid product sampling and collection.



Spherical Reactor for PE Synthesis

Pilot scale 8l spherical reactor for gas phase polyethylene synthesis.



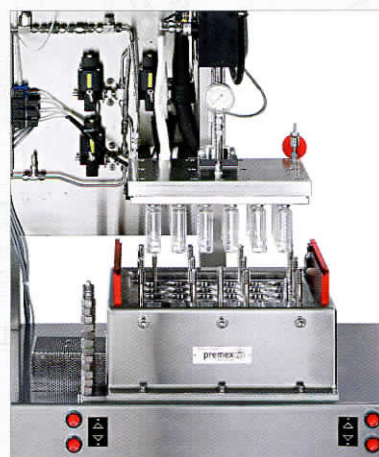
Pilot Autoclaves

Autoclaves up to 100l in stainless steel, Hastelloy and special alloys, ATEX approved.



Parallel Hydrogenation

Manual modular 20 parallel unit for hydrogenation & hydroformylation, designed for use with air and moisture sensitive catalysts. Glass vessel used as reactor up to 100 bar.



Parallel Polyolefin Screening

20 parallel automated unit for polyolefin screening. Shares vessel design with parallel hydrogenation unit, air and moisture sensitive catalyst testing outside the glovebox.