Catalytic reaction in the gas phase using fluidized-bed technology

QUALITY
MADE IN
GERMANY

alzchem
group

CONTINUOUS GAS-PHASE CHEMISTRY: HIGH PERFORMANCE, LOW WASTE

High selectivity, high throughput, low waste—continuous gas-phase chemistry combines performance and sustainability.

Fluidized-bed reactors enable solvent-free, catalytic processes with efficient heat control, simple catalyst handling, and significantly reduced by-product and waste streams compared to other processes.
Thanks to continuous operation and high selectivity, production campaigns can be run with high throughput and maximum efficiency.

When internal resources are constrained or highly specialized syntheses need to be outsourced: We support you from raw material procurement through chemical synthesis to on-time delivery—flexibly, transparently, and reliably.

TYPICAL REACTION TYPES

- Dehydration
- Ketonization
- Dehydrogenation
- High-temperature reactions
- Ammoxidation (O_2)
- Ammonolysis

...and many more – our capabilities cover an extensive portfolio of chemistries and process solutions, enabling us to address a wide range of production and application needs.

FROM TECH PACKAGE TO FINISHED PRODUCT

- **Process development**
- **Catalyst development**
- **Scale-up**
- **Commercial production**
- **Distillation**
- **Packaging**

OUR RANGE OF SERVICES IN CONTRACT SYNTHESIS

We support you throughout the entire value chain—from raw material procurement to process development and production, all the way through to delivery.

EQUIPMENT

- Three fluidized-bed reactors, each with a production capacity of 2 to 10 t/d
- Endothermic and exothermic reactions possible at temperatures up to 500°C
- Processing via multi-stage quenching, phase separations, and/or distillation (batch and continuous)
- Standalone/contract distillation
- Various distillation colums for product purification or external contract distillation
- Filling of liquids and solids into ISO containers, drums, big bags, and cartons, also according to customer requirements
- Exhaust gas combustion and wastewater treatment

IDEA › DEVELOPMENT › PRODUCTION › PACKAGING

Our service – your benefits

With Alzchem, you gain a strategic partner for tailor-made solutions – developed and **manufactured in Germany** to the highest quality standards. We combine rapid **responsiveness** with **reliability**, ensuring that **customer inquiries** are typically addressed within days while providing continuity through dedicated contacts who support you from initial discussions all the way to commercialization.

Our approach is consistently **customer-focused**: your requirements define our actions. Backed by decades of experience and **deep expertise** in organic synthetic chemistry, we are well equipped to realize even the most complex projects efficiently and reliably.

Our **state-of-the-art facilities** enable a broad spectrum of chemical reactions while meeting the highest standards in **quality, safety, and environmental protection**. At the same time, Alzchem stands for **supply security, transparency**, and a strong commitment to **sustainability** – values that our customers rely on.

By working closely together, we turn ideas into **successful solutions**. Alzchem provides the flexibility, innovation, and dependability needed to succeed in today's competitive chemical industry.

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