The application

Reactions using purified gases call for:

• Complete utilization of the gas
• High productivity
• Reliable containment of the gas and the products of reaction

The EKATO solution

High productivity in a simply constructed reactor with the EKATO combined gassing system:

• Combined action of two different impeller types
• Primary dispersion by the EKATO PHASEJET®
• Recirculation by the EKATO GASJET®
• Low concentrations of feedstock in the reactor due to high local rates of chemical conversion and short mixing times

The EKATO GASJET®

• Recirculation of reactant gas from the headspace with no external compressor
• Intensive mixing of feedstock and reactant gas in the impeller discharge zone
• High heat transfer rates

The EKATO PHASEJET®

• Gas introduced via rotating gas sparger
• High flooding limits
• Little change in power draw between ungassed and fully gassed conditions
• Homogeneous suspension of the catalyst
The EKATO combined gassing system ensures:

- High operating safety and reliability
- Low instrumentation and control costs
- Productivity boost through high mass transfer rates
- Minimum number of components

Typical applications

- Hardening of fats: Specified iodine number reached in one third of the time.
- Production of Sorbitol: In a batch time of 1.5 hours the residual glucose content can be reduced to 1,000–2,000 ppm.
- Reduction of aromatic nitro compounds: Doubling of productivity.