

# EKATO RMT

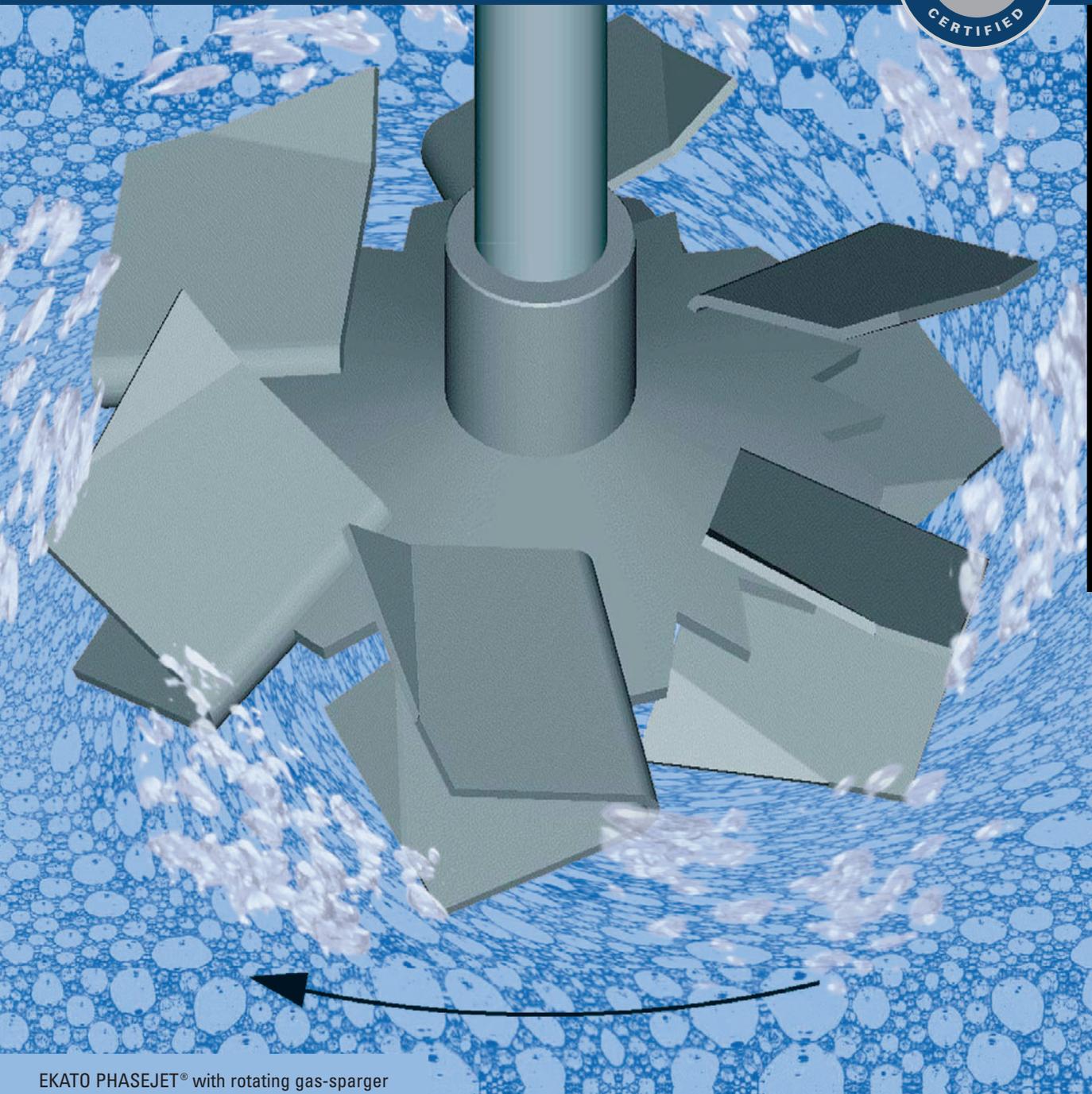
EKATO PHASEJET

## EKATO PHASEJET®

Process optimization with  
the high efficiency gassing impeller

EKATO Rühr- und Mischtechnik GmbH  
Käppelemattweg 2, 79650 Schopfheim, Germany  
Tel. +49 7622 29-0, Fax +49 7622 29-213  
e-mail: info@ekato.com

 [www.ekato.com](http://www.ekato.com)



Advanced Process Solutions

EKATO PHASEJET® with rotating gas-sparger

# EKATO PHASEJET®

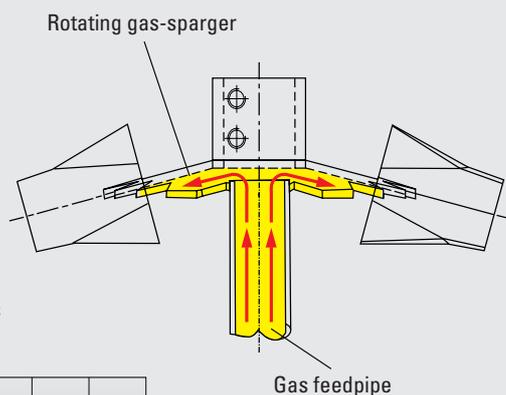
The patented EKATO PHASEJET impeller with specially contoured blades which match the gas cavities and prevent impeller flooding



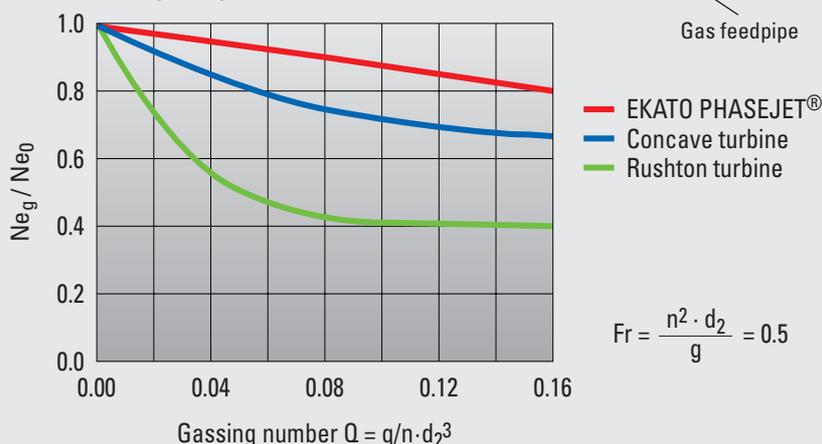
## Benefits

- Almost no reduction of power under gassing conditions
- A cost-effective design with fixed speeds during gassed and ungassed process steps
- A higher gas feed and a higher flooding point of the impeller when compared with the Rushton turbine
- Lower hydraulic radial forces, resulting in smaller shafts and cost savings.

The development of the EKATO PHASEJET demonstrates that even a proven impeller like the »Rushton« turbine can be improved upon. Rigorous application of fluid mechanics, process engineering expertise, state-of-the-art testing methods and CFD have led to a more efficient impeller which produces higher yields at lower costs.



Power drop for various impellers under gassing



## Task

When a disc turbine is used, the gas is normally introduced through an expensive sparger ring which is often susceptible to plugging or contamination during operation.

## Solution

By using the EKATO PHASEJET, the sparger ring can be replaced by a simple gas feed-pipe leading to a conically shaped disc which acts as a predisperser.

The EKATO design has several clear advantages:

- Cost-savings due to simple design
- No flow back into the pipe when the gas feed is interrupted. This prevents contamination (advantageous for sterile operations and fermentation processes)
- While ring spargers can become plugged if crystals are formed at the point of gas-liquid contact, here the reaction takes place at the predisperser. Due to high turbulence no scaling occurs.