



## About us

We have figured it out

*More than 60 years of  
STELZER Rührtechnik International*

*Agitator design and agitator systems*

STELZER Rührtechnik is one of the leading companies in agitation technology and a sought-after solutions partner for project-specific process technology solutions. We have succeeded in this business since 1946. Our core business was and is the technical design and production of custom-made agitators.

Many decades of experience, research and development at our own site in Warburg have provided us with extensive process knowledge and integrated systems knowledge in a variety of sectors. The technical concept, design, production, installation and initial operation of agitators will be performed by our highly qualified staff. We rely on tested safety according to DIN EN ISO 9001 in all phases of the project.

Our STELZER and JAMIX brands provide a total of 17 agitator series to choose from. We achieve optimal results by building on our established process technology experience and on further developments based on tests under realistic conditions in our in-house laboratory in combination with CFD computer simulations. The process engineering for each agitator is individually optimised, using detailed problem and process analysis as a reliable base.

## Performance spectrum

What we could do for you

Customer support and product development are tightly integrated at STELZER Rührtechnik. Give us any agitator problem and we will strive for an optimal solution. New requirements for complex processes, optimised procedures, improved quality as well as safety and productivity are part of our daily work.

### Consulting

Our services range from requirements analysis and the concept phase to realistic planning. We gladly pass on our expert knowledge and maintain close information exchange with the customer.

### Agitation tests

We will test the design of the agitators with original products in our agitator laboratory and search for optimisation potential - including concepts for successful scaling up.

### Basic research

We perform basic research in cooperation with scientific institutes, universities of technology and other universities in connection with our IT-based process design for agitators.

### Assembly

We install agitator systems in Germany, Europe and overseas and provide on-site supervision for all customer companies.

### ATEX

STELZER Rührtechnik is capable of producing agitators for environments with a risk of explosion according to the ATEX Directive 94/9/EC.

### CFD simulation

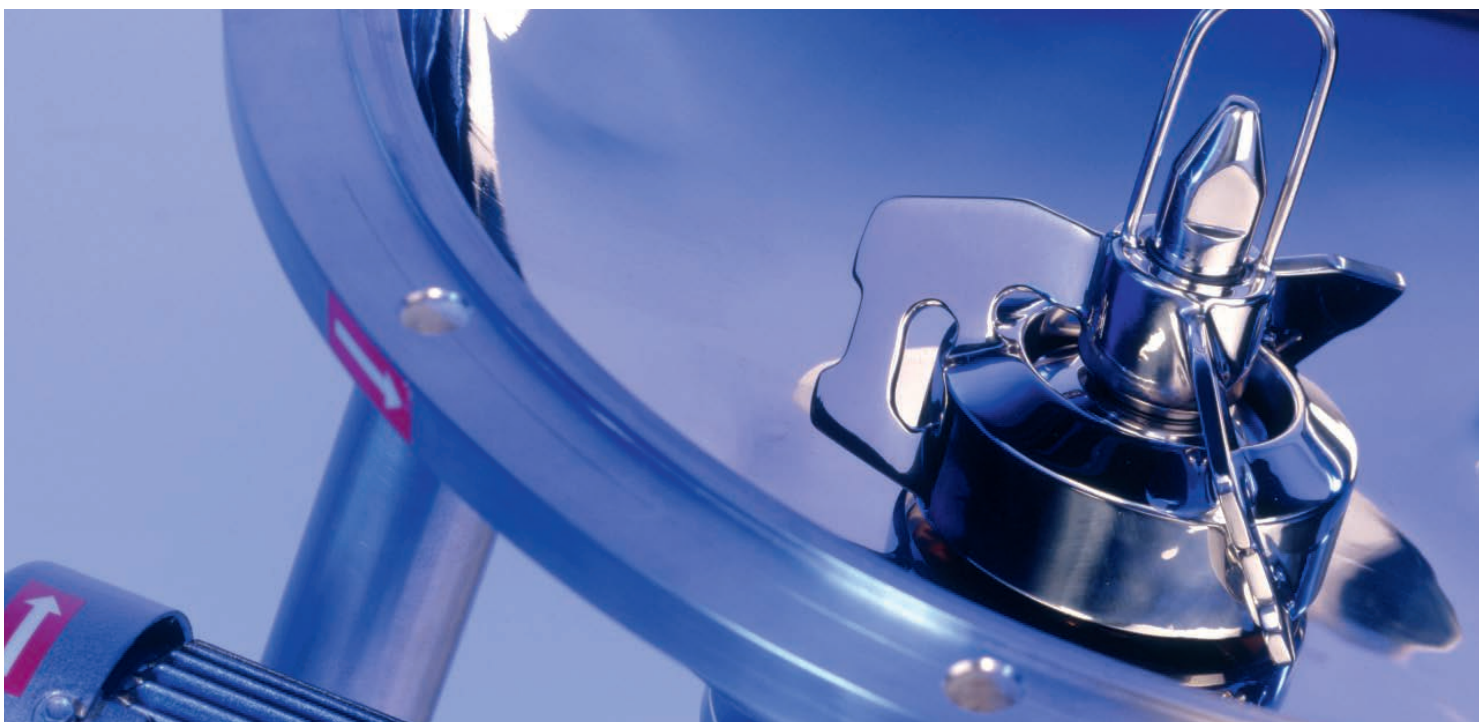
We are in demand as a solution partner for complex processes with Newtonian and non-Newtonian flow behaviour.

### Spare parts service

We are also your partner after successful installation. We deliver spare parts quickly, flexibly and reliably to all customers worldwide.

*Good to know:*

*Our quality management according to DIN EN ISO 9001 ensures that STELZER Rührtechnik will provide verified safety.*



# STELZER Agitators

## Overview

### VORTEX DIN Series

Motor Power 5,5 - 750 kW

Shaft Diameter 60 - 300 mm



### SDR/SBR DIN Series

Motor Power 5,5 - 300 kW

Shaft Diameter 60 - 280 mm



### SNR Standard Series

Motor Power 1,1 - 110 kW

Shaft Diameter 40 - 125 mm



### SKR Coaxial Shaft Series

Motor Power 1,5 - 160 kW

Shaft Diameter 40 - 200 mm



### Applications



Waste Water Treatment



Biotech / Pharma



Chemicals / Petrochemicals



Green Energy



Hydrometallurgy + Mining



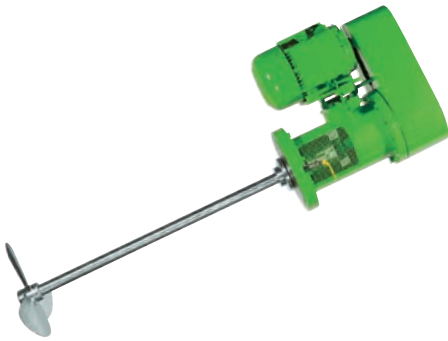
Food



Pulp & Paper

### SSR Side Entry Series

Motor Power 4 - 90 kW  
Shaft Diameter 40 - 125 mm



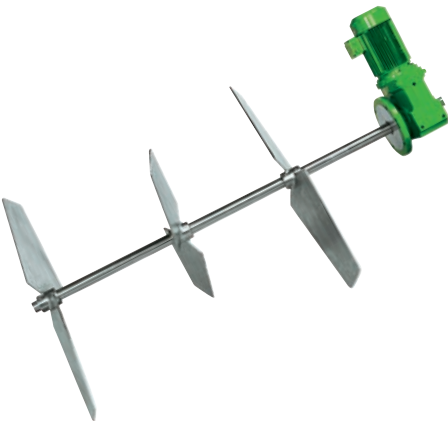
### SLS Life Science Series

Motor Power 0,37 - 5,5 kW  
Shaft Diameter 25 - 40 mm



### SHS/SHK Compact Series

Motor Power 0,37 - 55 kW  
Shaft Diameter 40 - 125 mm



### SM/SG Compact Series

Motor Power 0,37 - 15 kW  
Shaft Diameter 25 - 60 mm



### hermet Mag Drive Series

Motor Power 0,12 - 7,5 kW



*STELZER Rührtechnik can do more*

*If you should not find your industry or application among those listed, please contact us. We will certainly be able to come up with an answer to your question and a solution to your agitator problem.*



## JAMIX

Special solutions for special applications

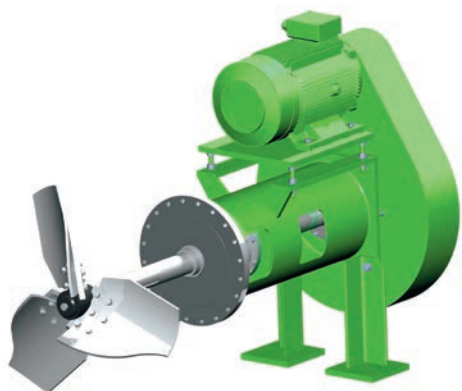
Agitators of the JAMIX brand allow STELZER Rührtechnik to focus on specific customer needs. JAMIX agitators can be very efficiently made of special materials such as titanium, Hastelloy or superduplex steel.

# JAMIX Agitators

## Overview

### Pulp & Paper "P&P"

Motor Power	7,5 - 110 kW
Shaft Diameter	60 - 110 mm



### Waste Water Treatment "WWT"

Motor Power	up to 55 kW
Shaft Diameter	60 - 220 mm



### "Green Energy"

Motor Power	up to 75 kW
Shaft Diameter	60 - 220 mm



### Hydrometallurgy + Mining

Motor Power	30 - 300 kW
Shaft Diameter	80 - 280 mm



### "Generator – Gassing"

Motor Power	5,5 - 200 kW
Shaft Diameter	60 - 200 mm



### Applications

- Waste Water Treatment
- Biotech / Pharma
- Chemicals / Petrochemicals
- Hydrometallurgy + Mining
- Pulp & Paper

## Standard Impellers/Extract

Your choice from ALPHA to ZETA



Marine Propeller



Pitched Blade Turbine 2, 4, 6 Blades



Rushton Turbine



Trapezoidal Impeller



SIGMA Impeller



ALPHA Impeller



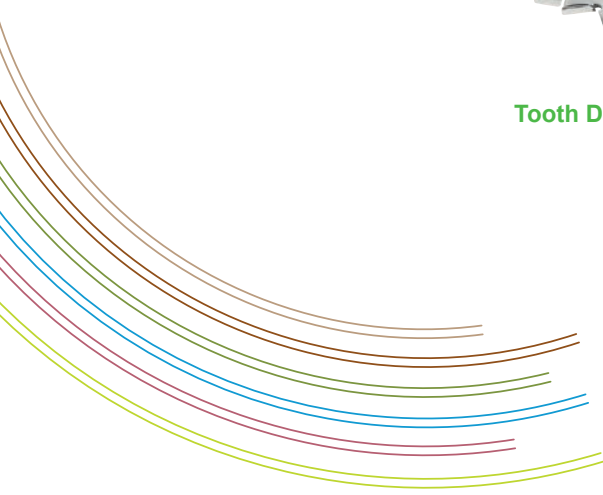
Tooth Disc Turbine



ZETA Impeller



Anchor Impeller





## Special Impellers/Extract

Covering your special requirements



PRL-3 and PRL-5 Draft Tube Impellers



Curved Back Turbine



Concave Gassing Turbines (example)



THETA/NA-Impeller



Generator Gassing Turbine



Segment Impeller



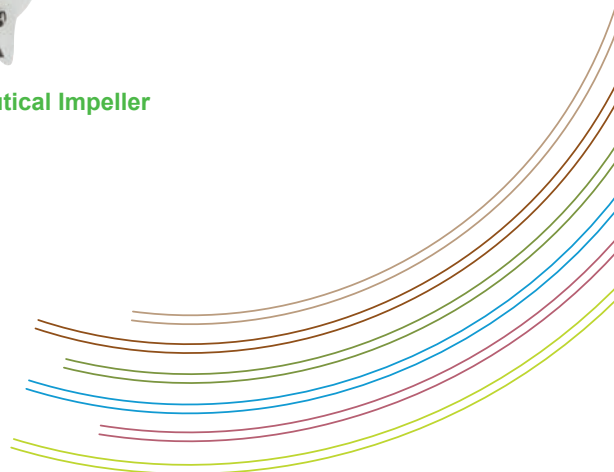
D3-Impeller



DELTA-Pharmaceutical Impeller



Visco-Propeller

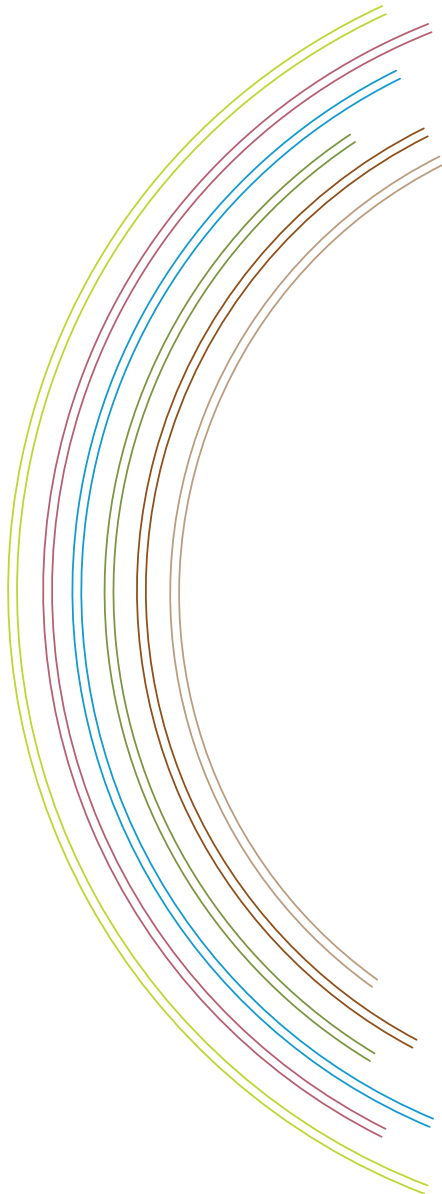


## STELZER Rührtechnik

### Technology laboratory

A laboratory with modern equipment is available for our tests. Suitable testing areas, already equipped with glass and stainless steel vessels in different sizes, are available for all test arrangements. The vessels can be optionally heated or cooled. Our standard agitators of various kinds include axial, radial, tangential and countercurrent flow impellers. They cover a viscosity range up to 1 million mPas.

A testing area with a coaxial agitator system is available as well. It provides optimal test conditions for tests with two agitator systems running in the same or in opposite directions. The measuring data of the practical tests are continuously registered to provide a basis for later scaling-up to original size.



Mixing time measurement by coloring/decoloring method

# STELZER Rührtechnik

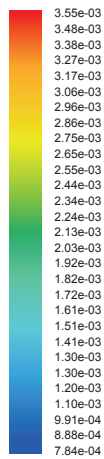
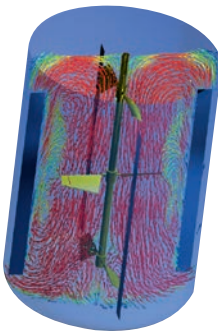
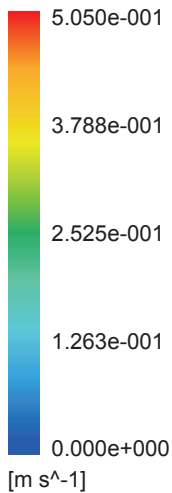
## CFD simulations\*

CFD simulations are used at STELZER Rührtechnik for conceptual studies of new designs, product developments, verification of agitator engineering design and supplementation of tests under realistic conditions in the laboratory. They can be used to simulate tests that are not possible with real media for safety reasons. This may be due to toxic, explosive or carcinogen effects of the product.

We use CFD simulations to assess the flow conditions in the vessels and determine whether a given agitator will perform as required. It is a further advantage that the model is running using the actual dimensions and not the model dimensions. The combination of the CFD investigations with conventional agitator software ensures maximum safety regarding the process engineering design for the agitator. In brief: Belt and braces.

\*CFD =  
Computational Fluid Dynamics

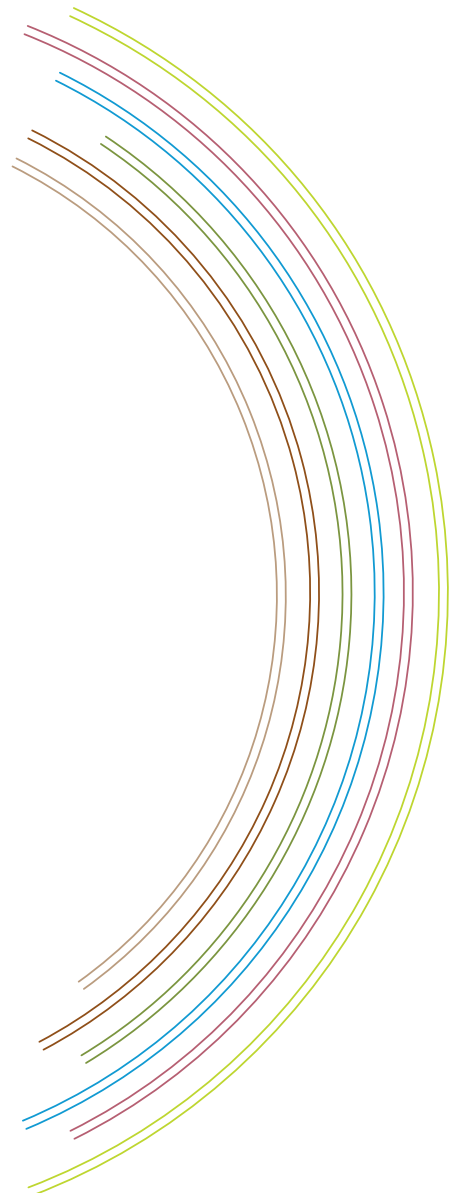
Velocity in Stn Frame  
Stromlinie 1



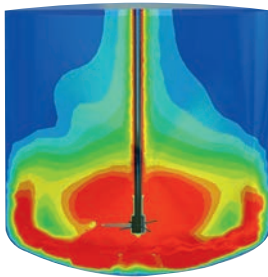
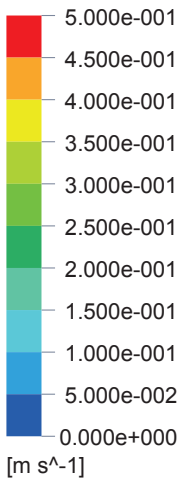
Contours of Mass fraction of tracer  
(Time = 1.3000e+01)

Vectors of velocities

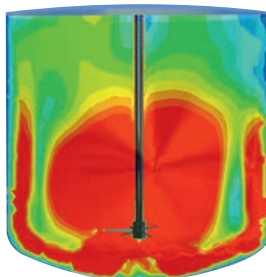
Mixing time calculation



Velocity  
Konturen 1



vs.



Non-Newtonian versus Newtonian flow behavior

