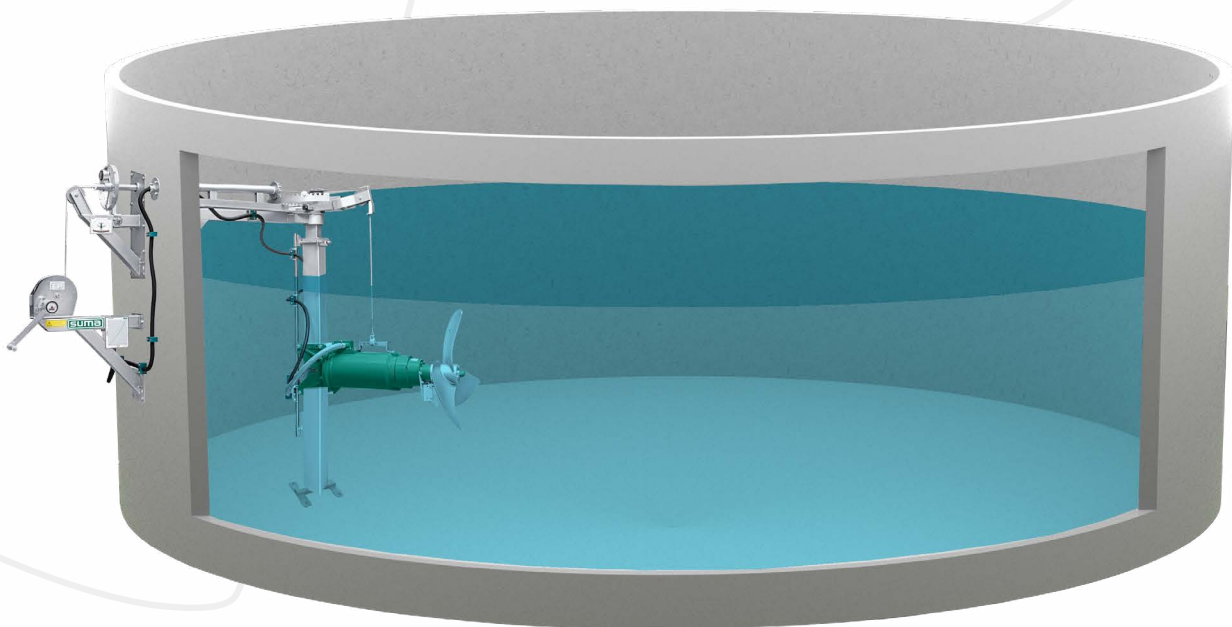


# Agitators for industry

Our service range

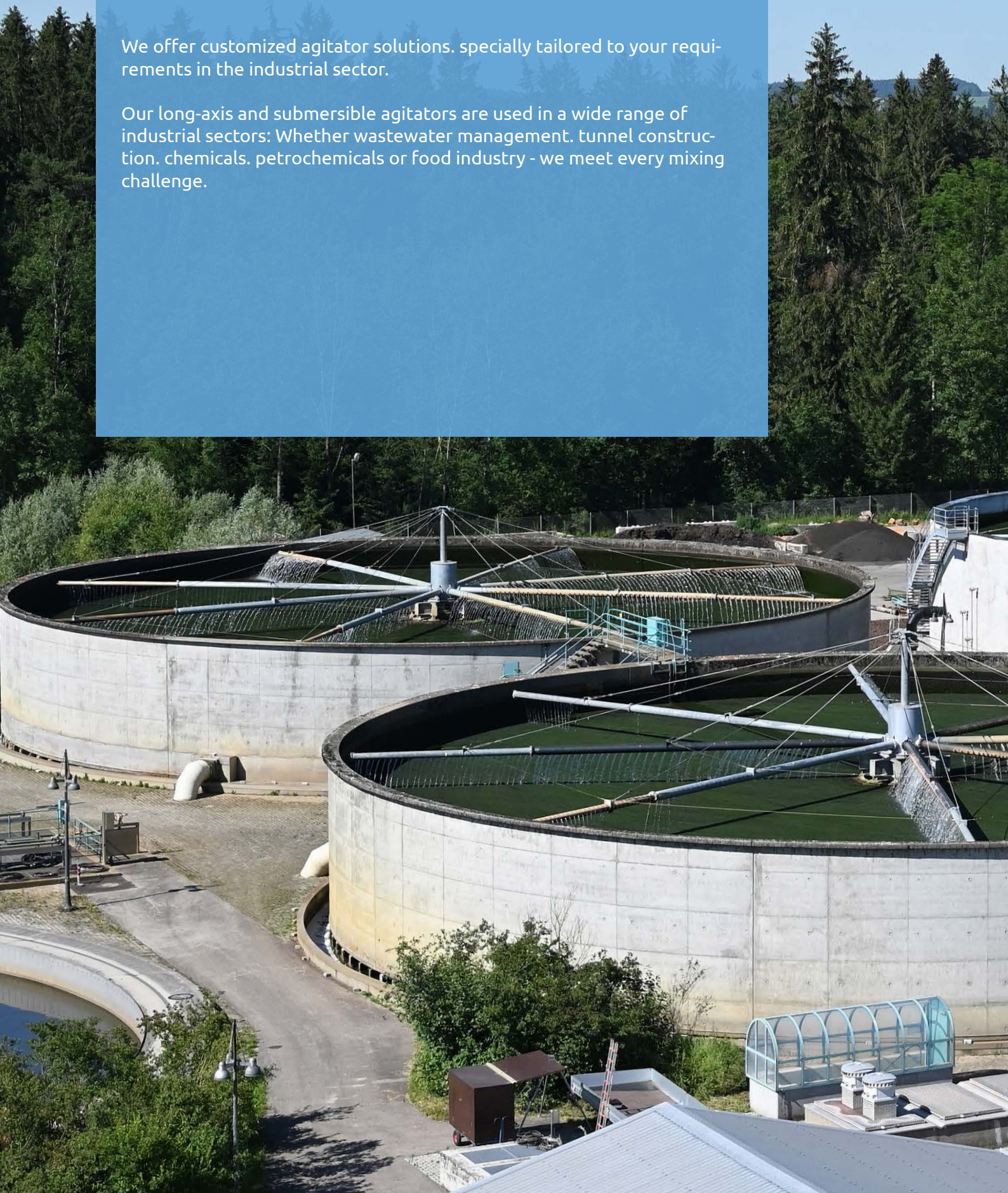




## AGITATORS FOR INDUSTRY

We offer customized agitator solutions, specially tailored to your requirements in the industrial sector.

Our long-axis and submersible agitators are used in a wide range of industrial sectors: Whether wastewater management, tunnel construction, chemicals, petrochemicals or food industry - we meet every mixing challenge.









## Our propellers

Efficient stirring is a decisive factor for the success of our processes. The agitator blade takes a central role in this. The blade influences the efficiency and the result of agitation like no other component of the agitator. However, depending on the tank, the agitator location and the substrate properties, the requirements on the agitator blade vary significantly.

As an experienced partner for industrial agitators, we offer you a wide range of agitator blade variants to optimize your processes. We develop and manufacture suction and push propeller, as well as aerodynamically optimized high-performance blades (HD+). Diameters from 250 to 2.600 and speeds from 1.450 rpm to 35 rpm allow specific configurations for maximum energy efficiency.

The material of the propeller must be suitable for the pH value of the substrate. Depending on the aggressiveness of the medium, either steel, galvanised, painted, hardened, or stainless steel is suitable.

With the possibility of uncomplicated retrofitting with a new agitator blade, even on older models, you always have all options open to meet your requirements and maintain the optimum performance of your agitator.



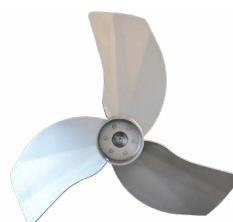
Propeller LD



High performance  
propeller HD / HD+



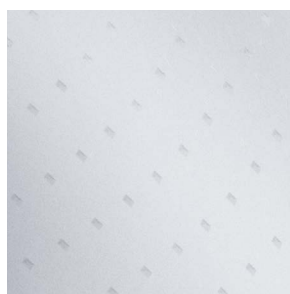
Propeller LT



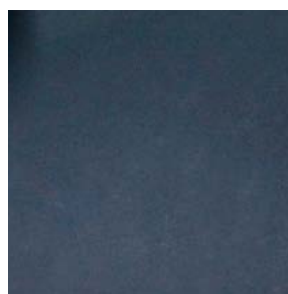
Propeller XT



Steel hardened



Stainless steel  
ss304 / ss31



Polymer coated



Sprayed armored

## TANK TYPES



Closed  
Tank



Tank concrete  
Top



Open  
Tank



Stell  
Tank



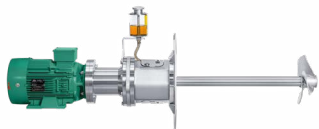
Open  
Lagoon



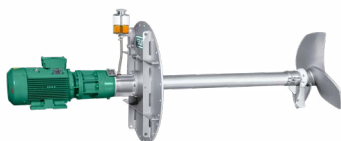
Slalom  
Channel



## Long axis agitators for the industrial sector



S-MIX



GIANTMIX FR light



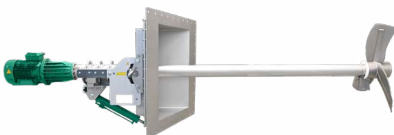
GIANTMIX FR SP



GIANTMIX FR stationary



GIANTMIX FT |  
FT top mount



GIANTMIX FTX |  
FTX top mount



GIANTMIX AMX |  
AMX top mount



REKORDMIX B1

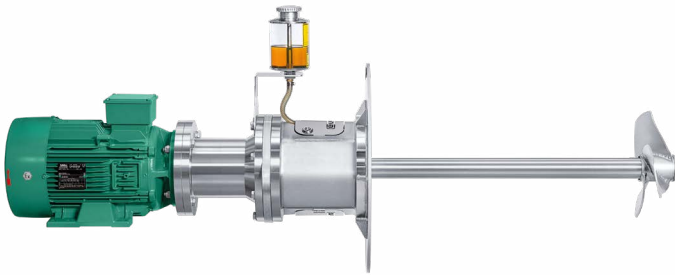


GIANTMIX BG2 |  
BG2 top mount





### S-Mix



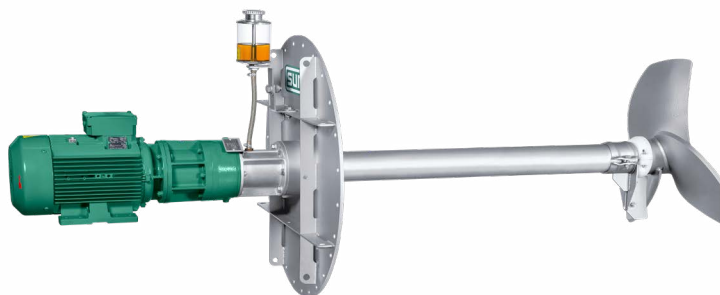
Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
S-MIX	4,0 kW	310 mm	950 rpm	0,70 kN	13 m <sup>3</sup> /min

- Especially for small and medium tank sizes in industry
- For TS contents of up to 8 % and pH values of 5.5 - 8.2
- Shaft length 0.6 | 0.8 m in V2A or V4A
- For operating depths up to 15 m below level
- Standard shutoff device allows seal and bearing replacement with filled vessel





## GIANTMIX FR light



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
FR 40-180	4,0 kW	700 mm	rpm180	0,85 kN	44 m <sup>3</sup> /min
FR 40-250	4,0 kW	620 mm	rpm250	0,95 kN	38 m <sup>3</sup> /min
FR 75-280	7,5 kW	700 mm	pm280	2,0 kN	57 m <sup>3</sup> /min
FR 75-380	7,5 kW	520 mm	rpm380	1,35 kN	35 m <sup>3</sup> /min

- Especially for concrete or steel tanks with nearly constant substrate levels
- For dry matter content up to 12 % and pH-value 6.5-8.2
- Tube length 1.0 | 1.5 in ss304 or ss316
- Installation depth up to 6 m beneath substrate level
- Easy assembly and maintenance outside the tank



FR light - Steel tank



FR light - Concrete tank





## GIANTMIX FR SP



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
FR1	7,5 kW	850 mm	200 rpm	2,0 kN	87 m <sup>3</sup> /min
FR3	11,0 kW	800   620 mm	275   400 rpm	3,2   3,9 kN	94   68 m <sup>3</sup> /min
FR4	15,0 kW	850   660 mm	275   400 rpm	3,6   4,3 kN	120   85 m <sup>3</sup> /min
FR5	18,5 kW	880   700 mm	275   400 rpm	3,7   4,3 kN	132   96 m <sup>3</sup> /min
FR6	22,0 kW	750 mm	400 rpm	4,5 kN	116 m <sup>3</sup> /min

- Mainly for fermenter and end storages with nearly constant substrate levels
- For dry matter content up to 14 % and pH-values from 6.5 - 8.2
- Tube length 3.0 | 4.0 m in ss304 or ss316
- Installation depth up to 8 m beneath substrate level
- Horizontally adjustable  $\pm 25^\circ$ , Vertically adjustable  $\pm 11^\circ$  optional  $\pm 30^\circ$
- Easy assembly and maintenance outside the tank



FR SP - Concrete tank



FR SP - Open lagoon





## GIANTMIX FR stationary



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
FR3	11,0 kW	580 mm	400 rpm	2,2 kN	52 m <sup>3</sup> /min
FR4	15,0 kW	620 mm	400 rpm	2,6 kN	68 m <sup>3</sup> /min
FR5	18,5 kW	660 mm	400 rpm	3,25 kN	84 m <sup>3</sup> /min

- Installation console for stationary installation
- For dry matter content up to 14 %
- Tube length 2.5 | 3.0 m in ss304
- Installation depth up to 8 m beneath substrate level



FR stationary - Steel tank



FR stationary - Steel tank



## GIANTMIX FT



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
FT1	7,5 kW	850 mm	200 rpm	2,0 kN	85 m <sup>3</sup> /min
FT3	11,0 kW	800 mm	275 rpm	2,9 kN	95 m <sup>3</sup> /min
FT4	15,0 kW	850   660 mm	275   400 rpm	4,1   3,3 kN	119   84 m <sup>3</sup> /min
FT5	18,5 kW	880   700 mm	275   400 rpm	4,4   3,9 kN	132   94 m <sup>3</sup> /min
FT6	22,0 kW	750 mm	400 rpm	4,5 kN	115 m <sup>3</sup> /min

- For dry matter content up to 14 %
- Installation depth up to 8 m beneath substrate level
- Tube length 4.0 | 5.0 | 5.5 | 6.0 m in ss304
- Horizontal adjustment up to  $\pm 30^\circ$  through handspindle
- Vertical adjustment up to  $\pm 30^\circ$  through hydraulic cylinder
- GIANTMIX FT also available as version for top mounting



FT - Closed tank

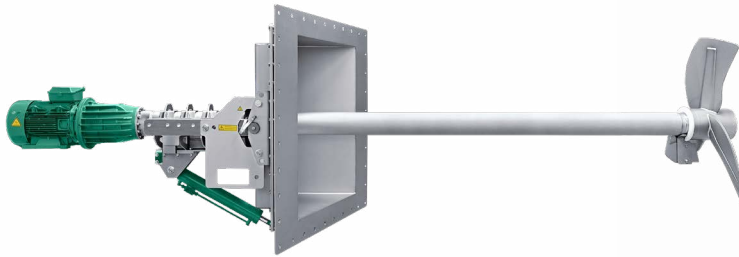


FT top mount - Closed tank





## GIANTMIX FTX | FTX top mount

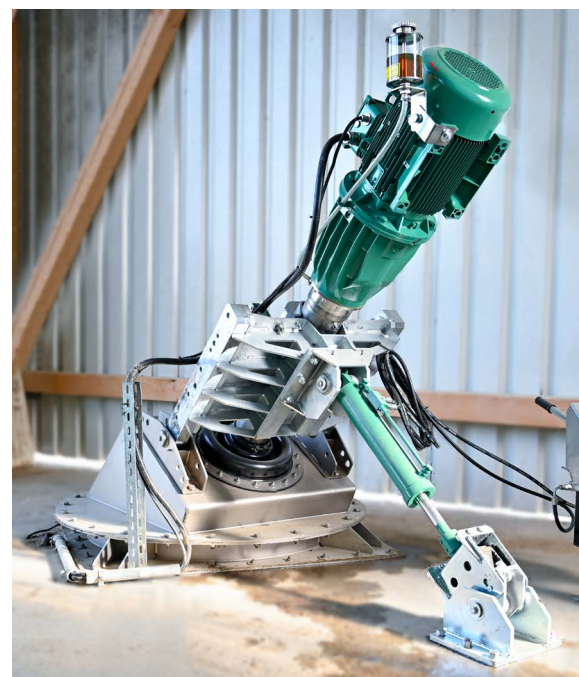


Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
FTX	15,0 kW	1.200 mm	135 rpm	6,5 kN	223 m <sup>3</sup> /min

- For highly viscous substrates with dry matter content up to 15 %
- Installation depth up to 8 m beneath substrate level
- Tube length 4.0 | 5.0 | 5.5 | 6.0 m in ss304
- Vertical inclination through hydraulic cylinder +5° / -30°
- IE4-motor with efficiency of 93.3 %
- GIANTMIX FTX also available as version for top mounting



FTX - Concrete tank



FTX top mount - Closed Tank



## GIANTMIX AMX | AMX top mount



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
AMX4	15,0 kW	1.600 mm	82 rpm	7,3 kN	412 m <sup>3</sup> /min
AMX5	18,5 kW	1.600 mm	82 rpm	8,1 kN	412 m <sup>3</sup> /min
AMX6	22,0 kW	1.600 mm	82 rpm	8,7 kN	412 m <sup>3</sup> /min

- Especially for highly viscous substrates with high dry matter content up to 16 %
- Installation depth up to 6 m beneath substrate level
- Tube length 4.0 | 5.0 | 6.0 m in ss304
- Vertical inclination through hydraulic cylinder +5° / -30°
- GIANTMIX AMX also available as version for top mounting



AMX - Closed Tank



AMX top mount - Closed tank



## REKORDMIX B1



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
Rekordmix B1	4,0 kW	320 mm	950 <del>1000</del>	0,6 kN	18 m <sup>3</sup> /min

- Especially for lagoons
- For dry matter content up to 10 %
- Tube length 3.75 | 4.25 m in ss304
- Vertical adjustment through upper link
- Gastight lead through using EPDM membrane with ring flanges on the foil reduces the risk of cracking due to vibrations



B1 - Closed lagoon



B1 - Open lagoon



## GIANTMIX BG2 | BG2 top mount



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
BG2	4,0 kW	700   620 mm	180   250 rpm	0,85   0,95 kN	44   38 m <sup>3</sup> /min
BG2	7,5 kW	700   520 mm	280   380 rpm	2,0   1,35 kN	57   35 m <sup>3</sup> /min
BG2	10,0 kW	750   580 mm	280   380 rpm	2,3   1,8 kN	74   48 m <sup>3</sup> /min

- Especially for lagoons
- For dry matter content up to 12 %
- Tube length 4.0 | 5.0 m in ss304 or ss316
- Vertical adjustment through upper link
- Gastight lead through using EPDM membrane with ring flanges on the foil reduces the risk of cracking due to vibrations
- GIANTMIX BG2 also available as version for top mounting



BG2 - Open lagoon



BG2 top mount - Concrete tank



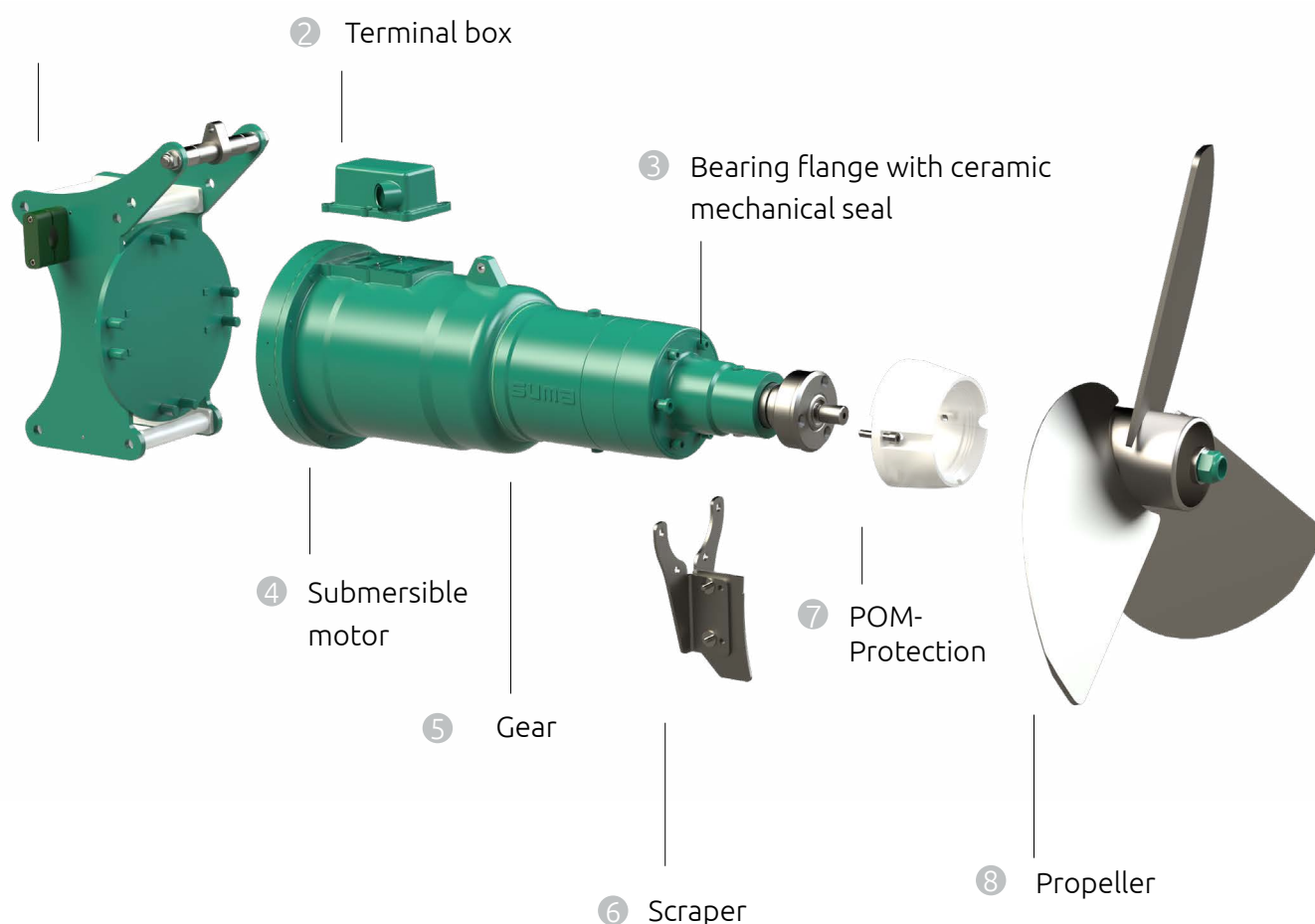
### Submersible agitator OPTIMIX

Thanks to our modular design, our submersible mixers can be individually combined in regard to motor power, gear, propeller and mast size. This enables us to offer an agitator that is optimally matched to your needs.

All our submersible mixers are suitable for substrate temperatures of up to 55°C and have separated oil chambers for motor, gear and bearing housing. Our special SUMA mechanical seal SiC/SiC seals the rotating shaft to the bearing flange and prevents substrate from entering the agitator blade bearing.

Microbe-resistant cable includes as standard in the delivery.

#### ① 4-roller guide unit



## Submersible mixers for the industrial sector



OPTIMIX 2A 15-720



OPTIMIX 2G 90-75



OPTIMIX 2G 30-35



OPTIMIX 2A 3 | 4 kW



OPTIMIX 2G 3 | 4 kW



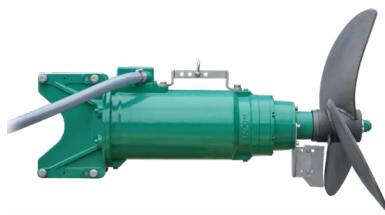
OPTIMIX 2A



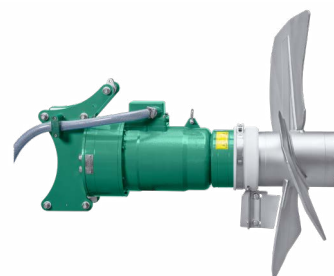
OPTIMIX 2G



OPTIMIX 3A



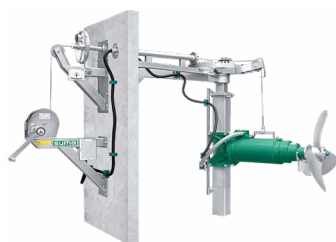
OPTIMIX 3G



OPTIMIX 4G



Suspension mounting  
frame EV

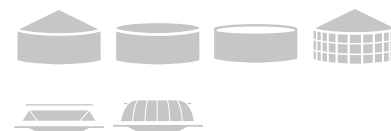


MGD

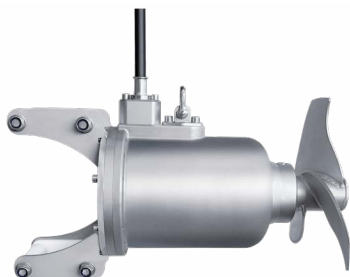


GDD



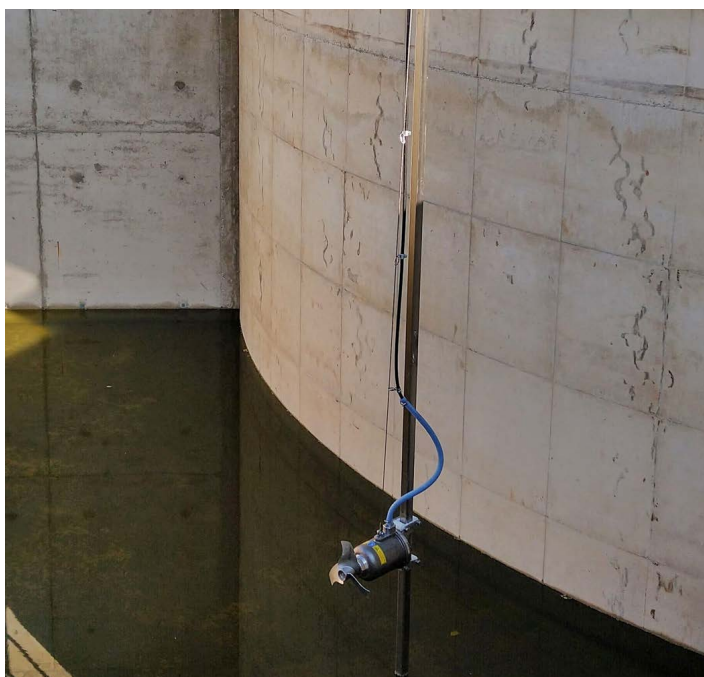


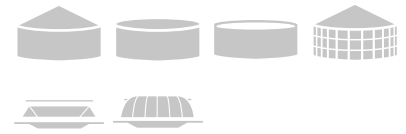
### OPTIMIX 2A 15-720



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
2A	0,8 kW	250 mm	738 rpm	0,24 kN	7 m <sup>3</sup> /min
2A	1,5 kW	320 mm	728 rpm	0,43 kN	13 m <sup>3</sup> /min
2A	2,2 kW	340 mm	714 rpm	0,50 kN	16 m <sup>3</sup> /min

- Fast running agitator for low pH-values
- Specially designed for use in the industrial sector - in particular for water and waste water management
- For dry matter content up to 4 % and pH-values from 5.5 - 8.2
- Completely made of stainless steel
- Self-cleaning stainless steel propeller



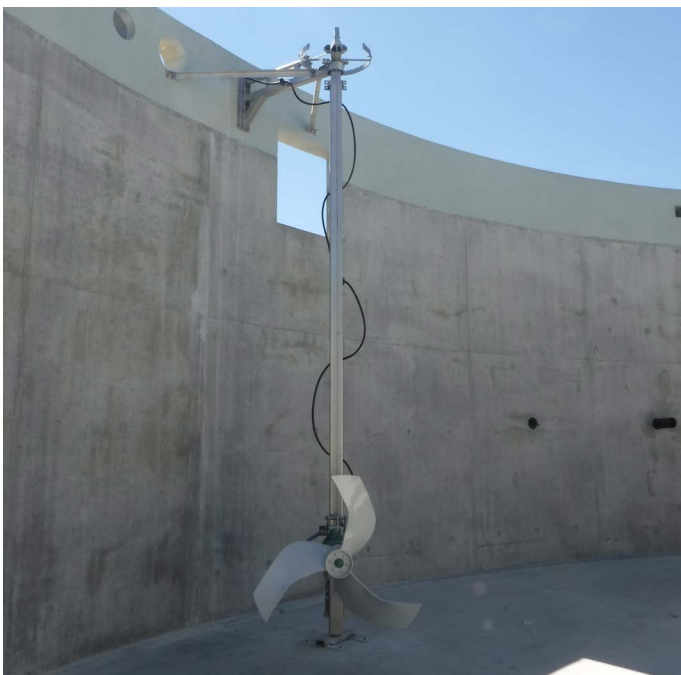


### OPTIMIX 2G 90-75



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
2G	5,5 kW	1.400 mm	75 rpm	2,6 kN	180 m <sup>3</sup> /min
2G	9,0 kW	1.400 mm	75 rpm	2,95 kN	162 m <sup>3</sup> /min

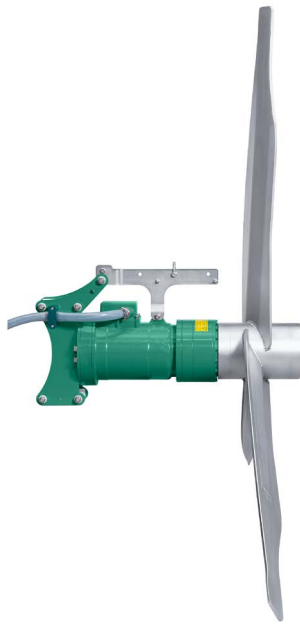
- Mainly for flow preservation in combination with other agitators
- For dry matter content up to 12 %
- 3-bladed LT 1400 propeller galvanized, stainless steel or hardened steel



2G - Closed Tank



2G - Open lagoon



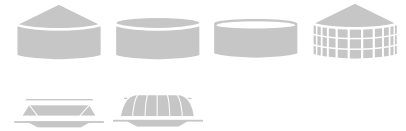
Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
2G 20-35	2,0 kW	2.200 mm	35 rpm	2,1 kN	251 m <sup>3</sup> /min
2G 30-35	3,0 kW	2.600 mm	35 rpm	3,45 kN	409 m <sup>3</sup> /min

- Submersible agitator for use in municipal and industrial wastewater
- For circulation of large water volumes, flow generation and maintenance, prevention of sedimentation, prevention of flocculation and oxidation and denitrification processes
- For dry matter content up to 4 %
- Approved in explosion protection zone 2

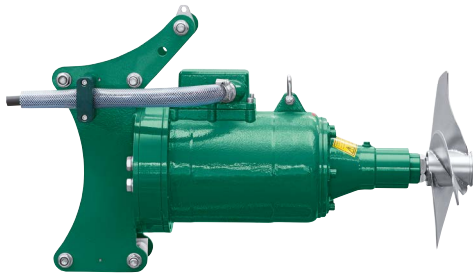


2G - Open tank

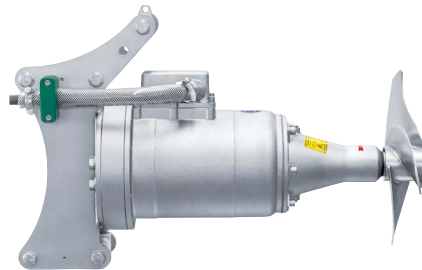




### OPTIMIX 2G | 2A 3 / 4 kW



Cast iron housing



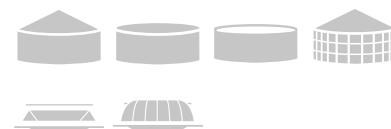
Stainless steel housing

Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
2G   2A	3,0 kW	380 mm	710 rpm	0,7 kN	24 m <sup>3</sup> /min
2G   2A	4,0 kW	310 mm	950 rpm	0,7 kN	13 m <sup>3</sup> /min

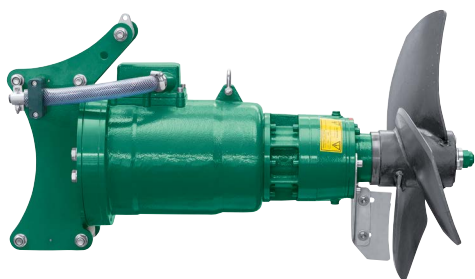
- Especially for smaller tanks
- For dry matter content up to 8 %
- OPTIMIX 2A completely made of stainless steel for aggressive media with low pH values



2A 3 / 4 kW - Closed Tank



## OPTIMIX 2G | 2A



Cast iron housing



Stainless steel housing

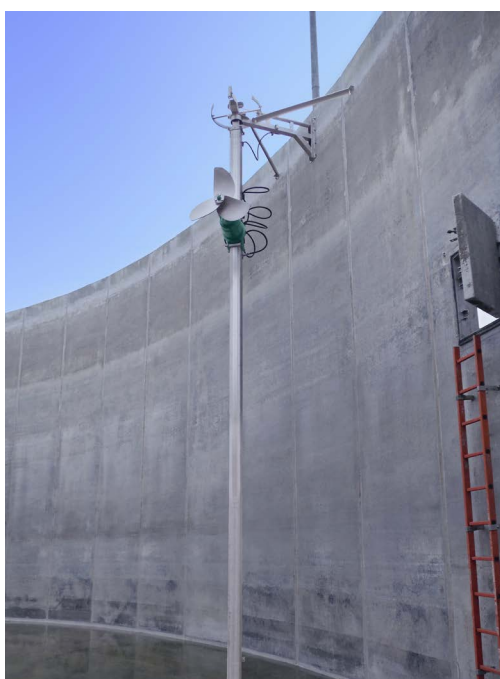
Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
2G   2A	4,0 kW	700   620 mm	180   250 rpm	0,85   0,95 kN	45   38 m³/min
2G   2A	9,0 kW	800   580 mm	280   380 rpm	2,8   1,9 kN	94   51 m³/min
2G	11,0 kW	820   620 mm	280   380 rpm	3,6   2,55 kN	128   64 m³/min
2G	15,0 kW	660 mm	380 rpm	3,1 kN	81 m³/min
2A	15,0 kW	850   660 mm	280   380 rpm	4,1   3,1 kN	120   81 m³/min
2A	13,5 kW	800   620 mm	280   380 rpm	2,9   2,55 kN	94   64 m³/min

### OPTIMIX 2G

- For dry matter content up to 12 %
- Optional available as direct rotor without gear

### OPTIMIX 2A

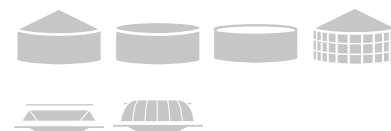
- For aggressive media with low pH values
- For dry matter content up to 12 %
- OPTIMIX 2A 13.5 kW authorized for Ex-Zone 1



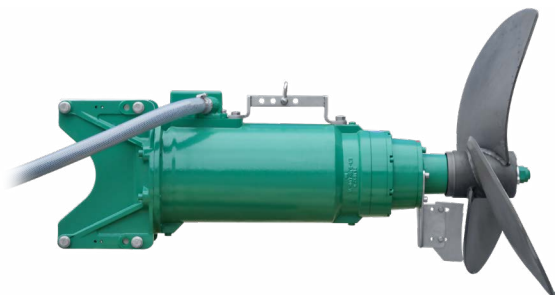
2G with EV - Concrete tank



2A with EV - Open tank



## OPTIMIX 3G | 3A



Cast iron housing



Stainless steel housing

Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
3G   3A	25,0 kW	900 mm	270 rpm	4,5 kN	135 m³/min

### OPTIMIX 3G

- High performance agitator for large tank dimensions
- For dry matter content up to 12 %

### OPTIMIX 3A

- High performance agitator for aggressive media with low pH values
- For dry matter content up to 12 %
- Completely made in stainless steel

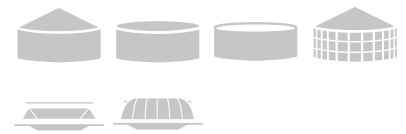


3G - Concrete tank

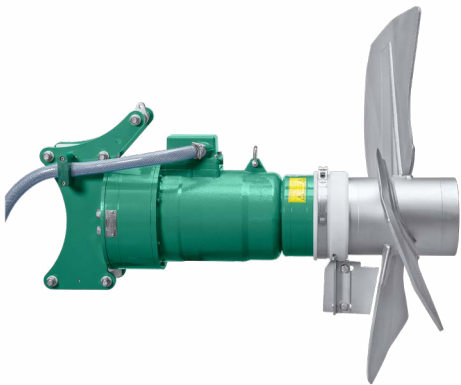


3A - Steel tank





### OPTIMIX 4G 150-135



Type	Power	Ø Propeller	Speed	Axial force	Pumping rate
4G	15,0 kW	1.200 mm	135 rpm	6,5 kN	223 m <sup>3</sup> /min

- Submersible agitator especially for viscous substrate
- For dry matter content up to 14 %
- IE4 motor with efficiency of 93.3%
- Approved for Ex-zone 2











4G with EV - Closed tank



4G with EV - Open tank

## Suspension mounting frame EV



Type	Doweling	Tank height	Cable guidance	Tank types
EV3	Wandhalterung innen	4 - 12 m	am Seil / Mast	  
EV4	Deckenhalterung außen	4 - 12 m	am Seil	 
EV5	Wandhalterung innen	4 - 12 m	am Mast / Seil	  

- For a 4-12 m container height
- Lateral rotation  $\pm 60^\circ$
- SUMA cable guidance and strain relief behind the guide mast
- Easy maintenance of the agitator without draining off the substrate or decending into the tank
- The whole OPTIMIX series are suitable
- Optional height indication to determine the exact height of the agitator within the tank



EV3



EV4



EV5

### Suspension mounting frame EV3 light



- For open concrete tanks (not gastight).
- For tanks with up to 7 m height
- Lateral rotation  $\pm 60^\circ$
- Suitable for OPTIMIX 2A 15-720
- Base frame and wall support in ss304

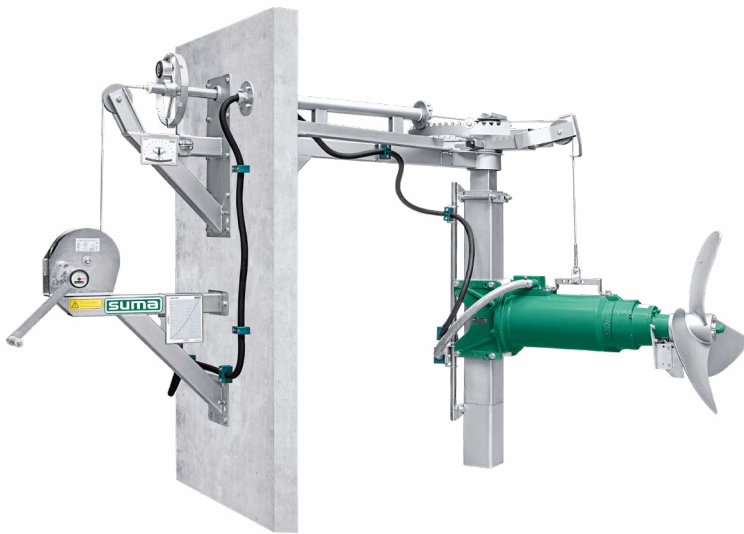


EV3 light





### Mast gastight wall lead through MGD



- Guide mast with base frame for tanks with a depth up to 14 m
- External vertically rotation 210°
- Adjustable in height through cable winch
- Optional SUMA height indication to determine the exact agitator height in the tank
- Optional angle display to determine the exact angle position of the agitator
- Optional other heights on request



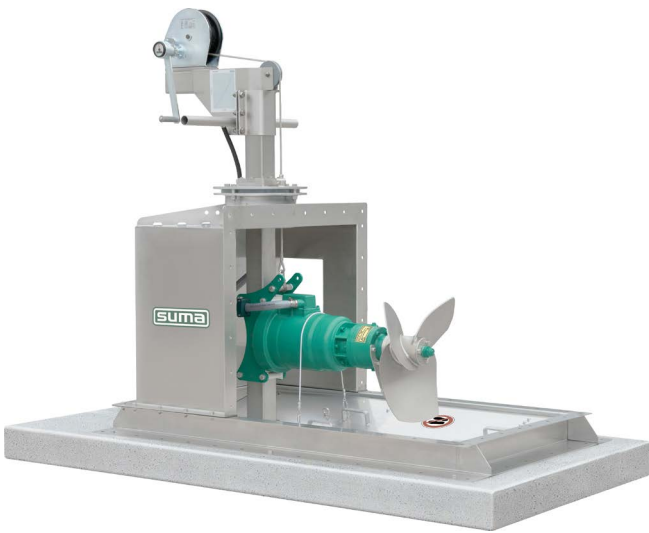
MGD - Betonbehälter mit 2G



MGD - Betonbehälter mit 2G



### Gastight ceiling lead through GDD



- Especially for closed tanks, lagoons with bridges and other special tanks up to 12 m depth
- Lateral adjustment up to 360°
- SUMA height indication to determine the exact agitator height in the tank
- For all OPTIMIX series applicable
- Optional available access cover reduces the loss of gas while maintenance
- Optional other heights on request

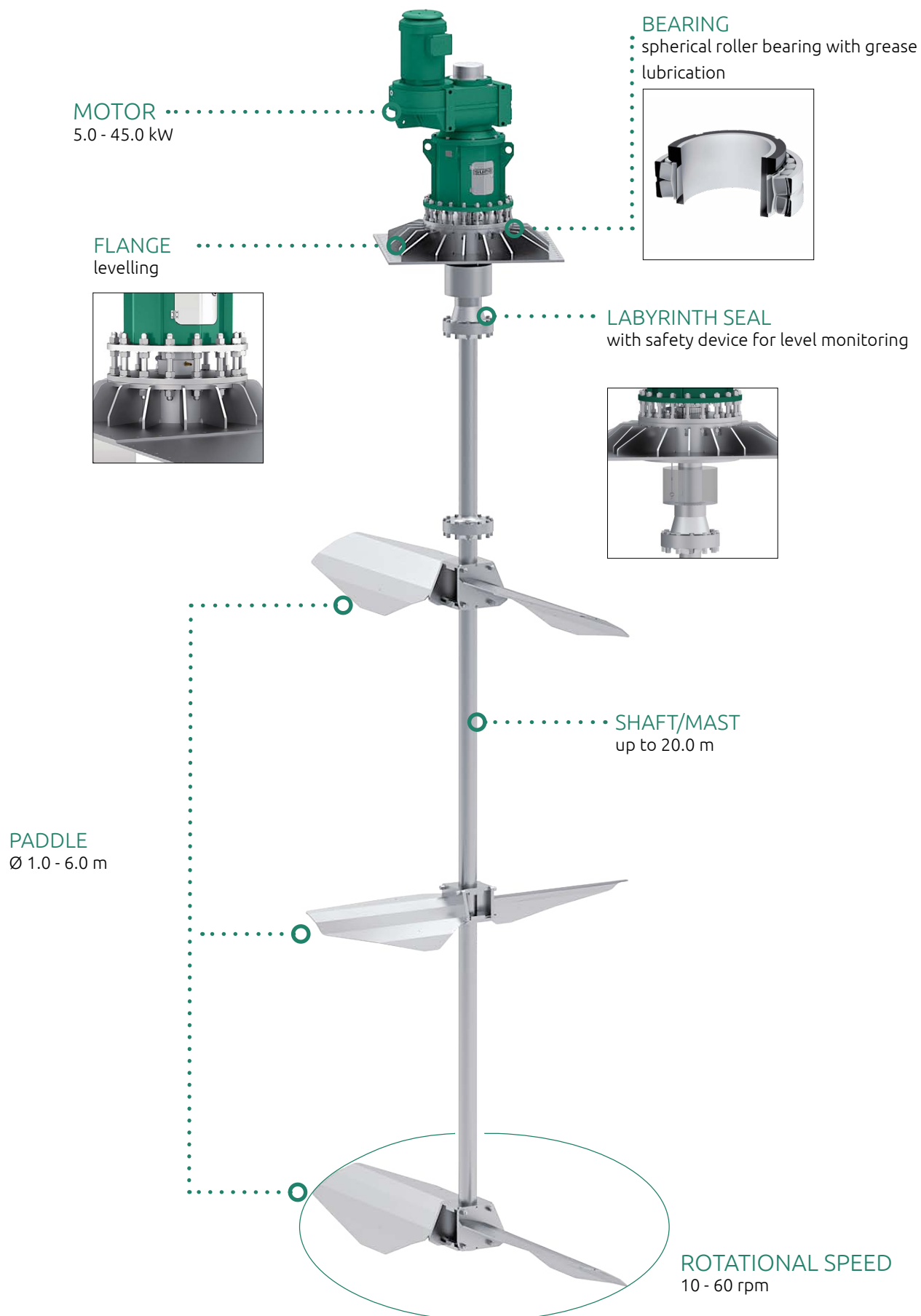


GDD - Betonbehälter



GDD - Stahlbehälter

## Central mixer



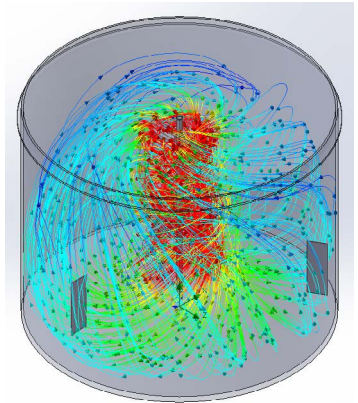
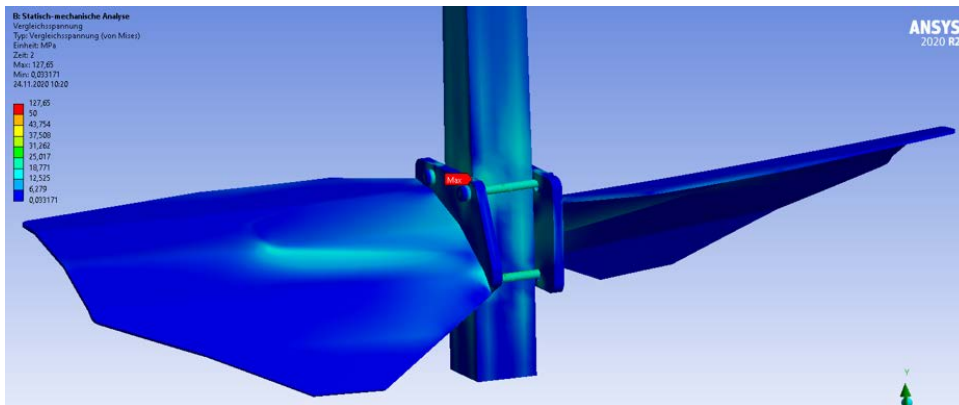


## Central mixer

For solutions perfectly tailored to your requirements, we draw on our extensive product portfolio of agitators. This includes the central mixer Z-MIX, which ensures axial mixing of your ferment for fermentation of sewage sludge, waste, and agricultural and industrial residues. In particular, the Z-MIX is suitable for use in tanks with a volume of 100 - 10,000 m<sup>3</sup>, where diameter and height correspond to a similar length. The agitator is characterized by low energy consumption.

### ENGINEERING

Based on tank geometry, substrate properties and many other factors, our engineers use software-supported flow simulations and load capacity calculations to design a central mixer that will perfectly meet with your requirements.



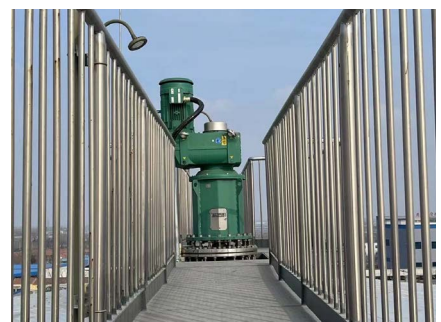
### PRODUCTION

Since the company foundation in 1957 the value creation has almost exclusively taken place at our headquarters. Our ideal manufacturing depth impacts the quality during the entire process chain, enabling us to carry out adjustments with ease any time and to execute customization cost-effectively.



### SERVICE & ASSEMBLY

By purchasing a SUMA mixer, you have chosen maximum quality. Be it for a new installation, modification, component exchange or maintenance work - our team of experienced service specialist will support you 24 hours a day, 365 days a year. Depending on the customer's requirements, the Z-MIX can be installed from outside or in sections from inside. In addition access to the drive shaft offers easy maintenance.



	Date

	Date





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