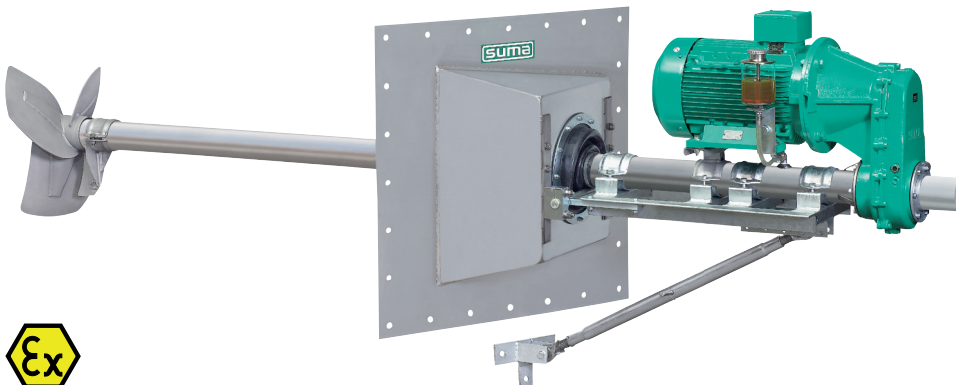


## Long axis agitator Giantmix FR 30°



**FR1 30° 75-200**

**FR3 30° 110-275**

**FR4 30° 150-275**

**FR4 30° 150-400**

**FR5 30° 185-400**

**Powerful**

**Low maintenance**

**Innovative design**

### Application

Biogas tanks (fermenter, post digester, end storage)  
 Dry matter content up to 14 %  
 Substrate temperature up to 70°C  
 pH-value 5.5 - 8.2

### Technical data

Tube length 3.0 / 4.0 m  
 Tube Ø 101.6 x 4,00 mm (max. 3 m)  
 or x 5.7 mm, ss304, ss316 on request  
 Sealing plate / frame 98 x 98 cm ss304  
 ss316 on request  
 Sound pressure level 75 dB(A)  
 Sealing membrane in EPDM60  
 Installation up to 1.5 m below substrate level  
 Oil equalizing container for monitoring the tightness  
 Option: Power take-off with protection for an  
 alternativ tractor operation (at max. HD+ 700)  
 Agitator completely in modular design

### Motor

7.5 kW : 8-poles  
 11.0 / 15.0 / 18.5 kW : 4-poles  
 400 V, 50 Hz, special tensions on request  
 PTC thermistors 160°C as overheat protection  
 Ex-Motor  $\text{Ex}$  II 3G Ex nA IIA T3 Gc  
 Special design 13.5 kW:  $\text{Ex}$  II 2G Ex e IIA T3 Gb  
 Optional: Rain protection hood (ss304)

### Gear

Spur gear drive, helical teeth, low noise level  
 Reduction ratio  $i = 3.69$  or  $5.31$   
 Own oil circuit, gear oil SAE85W-140 / API GL-5  
 Oil change all 2,000 operating hours

### Bearing

2 tapered roller bearings to absorb the axial forces  
 Mechanical seals of SiC/SiC independent of rotation  
 Interim bearings for the drive shaft (slide bearings)

### Propeller

3-blade high efficiency propeller, dynamically balanced

FR1:	7.5 kW	200 rpm	Propeller HD+ 850
FR3:	11.0 kW	275 rpm	Propeller HD+ 800
FR4:	15.0 kW	275 rpm	Propeller HD+ 850
FR4:	15.0 kW	400 rpm	Propeller HD+ 660
FR5:	18.5 kW	400 rpm	Propeller HD+ 700

Standard in ss304, optional ss316, or hardened steel

### Adjustment range

Sealing plate 30° ss304 with tight lateral alignment  
 Vertical inclination through upper link or optional  
 through rack winch

### Ex-zone

Ex-Zone 2 (outside the tank) and  
 Zone 1 (inside the tank)  
 Special design FR4 13.5 kW for Zone 1 (outside)  
 Classification mechanical components  
 $\text{CE}$   $\text{Ex}$  II 2G ck IIA T3

### Control switch (optional)

Star-delta switch (up to max. 15 kW),  
 soft start or frequency converter  
 Delivery without connecting cable

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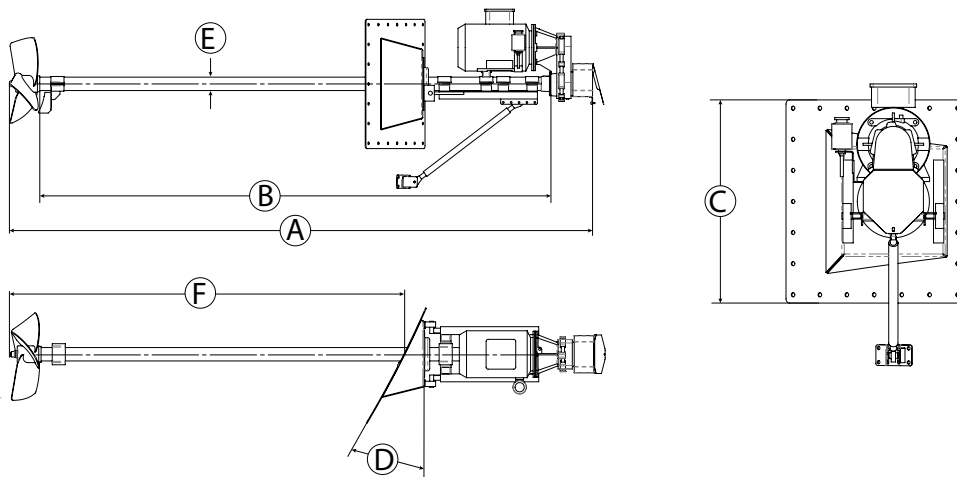
FR1 30° 75-200

FR3 30° 110-275

FR4 30° 150-275

FR4 30° 150-400

FR5 30° 185-400



Dimensions												
Type	A [m]	B [mm]	C [m]	D	E [mm]							
FR4 / FR5	3.5 / 4.5	2.9 / 3.9	0.98	30°	ø 101.6							
FR1 / FR3 / FR4 (275 rpm)			1.2									

Technical data												
Type	Rated Power [kW]	Propeller speed [rpm]	Rated Voltage [VΔ]	Rated current [AΔ]	Frequency [Hz]	Power factor cos φ	Gear reduction ratio	Propeller diameter [mm]	Axial force [kN]	Flow velocity [m/s]*	Pumping rate Water [m <sup>3</sup> /min]	Weight approximate [kg]
FR1	7.5	200	400	18.0	50	0.70	3.69	850	2.0	2.6	85	550
FR3	11.0	275	400	21.0	50	0.87	5.31	800	3.0	3.2	95	550
FR4	15.0	275	400	27.3	50	0.86	5.31	850	4.1	3.6	119	550
FR4	15.0	400	400	27.3	50	0.86	3.69	660	3.3	4.3	84	550
FR5	18.5	400	400	34.0	50	0.85	3.69	700	3.9	4.3	94	550

Subject to technical changes

\* measured in water and 1.2 m distance