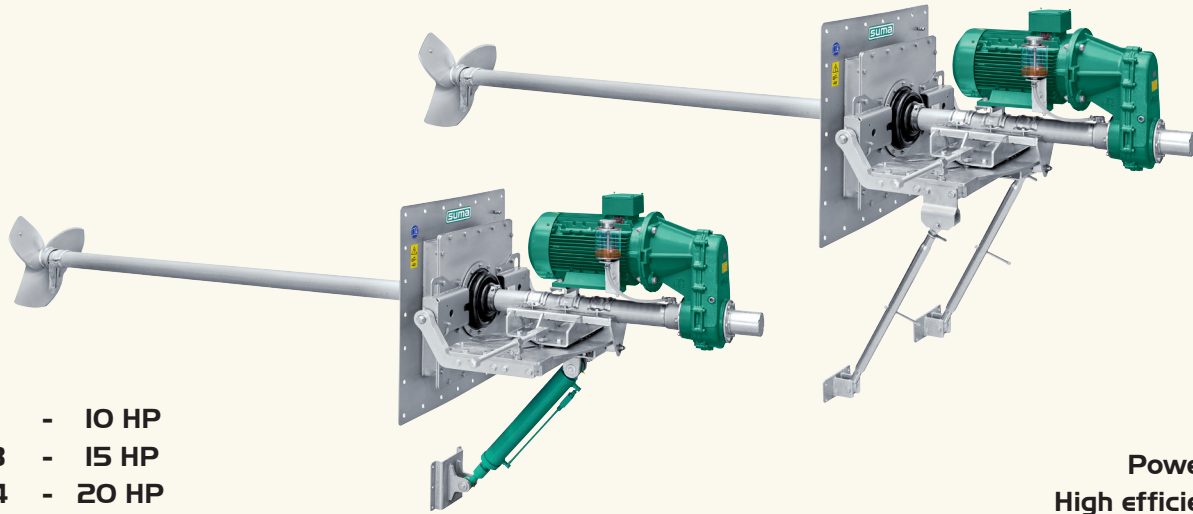


Long-Axis Agitator Giantmix FR SP



- Type FRI - 10 HP
- Type FR3 - 15 HP
- Type FR4 - 20 HP
- Type FR5 - 25 HP

**Powerful
High efficiency
Low cost maintenance**

Application

Biogas digester
(Fermenter - Post digester - End storage tank)
Dry matter content up to 14 %
Substrate temperature up to 70°C
pH-values 6.5 - 8.2
low speed- and high speed engine

Technical Data

Tube length 9.8 / 13 ft
Agitator shaft \varnothing 4 x 0.15 or x 0.2 in in ss304
Sealing plate/frame 3.2x3.2 / 3.9x3.9 / 4.7x4.7 ft in ss304
ss316 on request
Sound pressure 75 dB(A)
Installation up to 26 ft beneath substrate level
As standard with upper link
Option: Power take-off with protection for an alternative tractor operation at max. HD+ 700
Oil inspection glass as service indicator and for monitoring the impermeability

Motor

Low speed: 10 hp - 8-poles / 15 hp - 6-poles
High speed: 20 / 25 hp - 4-poles
60 Hz, special tensions on request
Temperature sensor 3 x PTC 160°C (overload protection)
Ex-Motor (Series) Ex II 3G Ex nA IIA T3 Gc
Special design 18 hp: Ex II 2G Ex e IIA T3 Gb

Gear

Spur gear drive, helical teeth, low noise level
Reduction ratio $i = 3.69$
Own oil chamber, gear oil SAE 85W-140 / API GL-5
Oil change interval after 2,000 operation hours

Bearing

2 tapered roller bearings for thrust
Mechanical seal SiC/SiC
Interim bearings for the drive shaft

Propeller

3-blade high efficiency propeller, dynamically balanced

FR1:	10 hp	propeller HD+ 800	240 rpm
FR3:	15 hp	propeller HD+ 700	315 rpm
FR4 LL:	20 hp	propeller HD+ 750	330 rpm
FR4:	20 hp	propeller HD+ 540	480 rpm
FR5:	25 hp	propeller HD+ 580	480 rpm

Standard is ss304, optional ss316, hardend steel or hardened ss304

Adjustment range

Horizontally adjustable $\pm 25^\circ$ through spindle
Optional vertically adjustable through hydraulic cylinder or gear rack up to $\pm 30^\circ$
Tank openings: 27.5 x 27.5 in (Plate 3.2 ft)
31.5 x 31.5 in (Plate 3.9 ft)
39 x 39 in (Plate 4.7 ft)

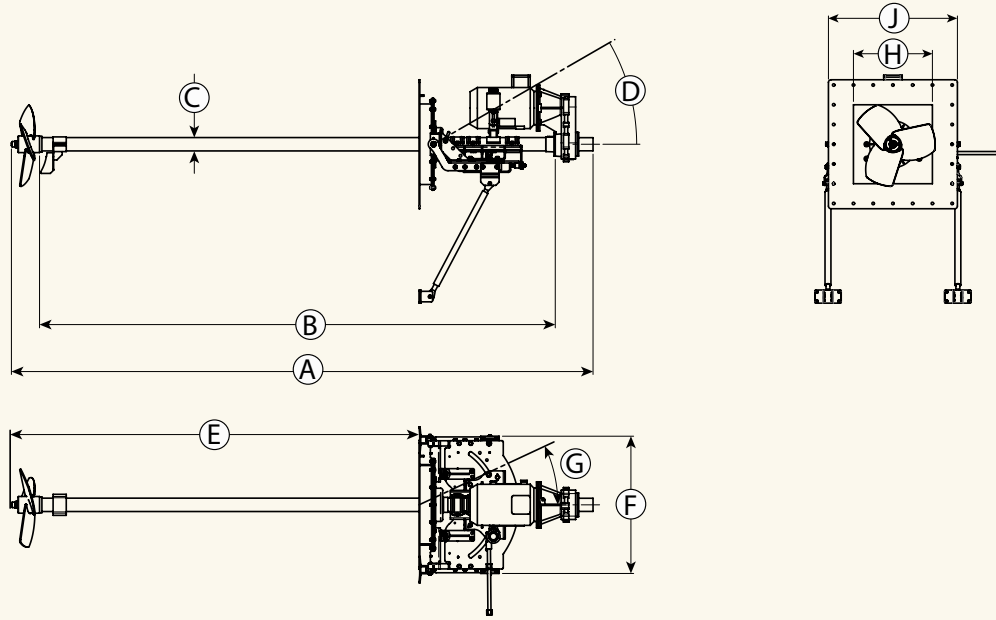
Ex-Zone (tube and gear)

Ex-zone 2 (outside the tank) and zone 1 (inside the tank)
Special system FR with 18 hp für Zone 1 (outside)
Classification mechanical components
 Ex II 2G ck IIA T4

Control switch (optional)

Star-delta-switch, soft start or frequency converter
Delivery without connection cable

Long-Axis Agitator Giantmix FR SP



Dimensions									
Type	A (in)	B (in)	C (in)	D	E (in)	F (in)	G	H (in)	J (in)
FR SP	138 / 177	114 / 154	4	max. ± 30°	87 / 126	43	max ± 25°	0.03	*

* FR1 / FR3 / FR4 LL:
FR4 / FR5

J = 47 in
J = 38.5 in

Technical Data											
Type	Rated Power [hp]	Rated Voltage [VΔ]	Rated Current [AΔ]	Frequency [Hz]	Gear reduction	Propeller speed [rpm]	Propeller diameter [in]	Axial force [kN]	Flow velocity [ft/s] *	Pumping rate water [gal/min]	Weight approximate [lbs]
FR1	10	460	10	60	3.69	240	31.5	2.0	9.8	22718	1433
FR3	15	460	10	60	3.69	315	27.5	2.6	10.8	19284	1433
FR4 LL	20	460	12	60	5.31	330	29.5	3.1	12.0	24832	1433
FR4	20	460	12	60	3.69	480	21.0	2.7	13.7	14529	1433
FR5	25	460	18.5	60	3.69	480	23.0	3.2	13.4	16378	1433

Subject to technical changes

* measured in water and 1.2 m distance