

# Stationary mixers Feeders for Biogas plants



**NEW!**  
Triodur and  
Triocot

- Reliable and Low-maintenance
- Optimal mixing and cutting of the material
- Capacity 350-2,850 cu. Ft (10-80 m<sup>3</sup>)
- Very low power requirement
- Saves time and labour
- Weighing system for exact loading
- Electrical drive





### Regenerative Energy

Currently mankind is using up fossils fuel stocks at an increased rate. The constantly rising prices of fuel and energy is the logical consequence. This makes alternative energy sources viable. Reliable biogas installations, extensively tried and tested in practice, can be used to produce electricity, thermal energy, and fertiliser from Biomass. A biogas installation is the clean and logical road to generate and provide sustainable energy from agricultural resources.



### Trioliet loading systems for biogas digester

Trioliet vertical mixers are excellently suitable for feeding biogas plants. All Trioliet stationary mixers have a highly stable auger supported by the integrated frame. Consequently, all forces extended on the mixing auger are directly taken up by the frame. This design relieves the mixing chamber bottom and the gearbox. The compact and closed planetary drive ensures a constant and controlled rotating movement of the cutting mixing auger. The auger runs in a maintenance-free conical roller bearing at the top and a sinter slide bearing at the bottom. The optimum auger shape ensures quick and homogenous mixing at a low power requirement. Just above the bottom, at the lower end of the mixing chamber wall where the pressure on the wall is highest, a special Trioliet wearing ensures stability and a long service life.

### Patented Trioliet horizontal flow system

The Trioliet stationary mixers with two or three vertical mixing augers are equipped with special triangular inserts between the mixing augers for interaction between the front and rear mixing chamber sections, resulting in the feed not only being mixed in the usual vertical direction, but also in the lengthwise direction of the wagon. The triangles are not placed directly opposite each other, but a little offset.

### Longer service life for stationary mixers

Trioliet has developed two types of solutions for corrosion protection, among others, for feeding systems for biogas installations.



### Triodur coating

The Triodur protective layer is a corrosionproof coating made of fibre-reinforced thermohardening plastic. The layer thickness of the coating is between 0.6 and 1.2 mm, and is applied to the bottom, wear ridge and wall (excl. extension rim). The Triodur coating offers very high resistance against both corrosion and mechanical wear and tear. Due to the high resistance against chemical damage, the service life is greatly increased. A 2-year guarantee is provided.



### Triocot lining

With the Triocot lining, the body of the mixer is covered on the inside with thermo-plastic material. The layer thickness on the bottom and wear ridge is 12 mm, 8 mm on the walls and 10 mm on the inserts. This thermoplastic lining offers an incredibly high resistance, both against wear and tear and against corrosion. The corrosion-resistant properties are many times better than those of stainless steel. The lining can be applied in the field (afterwards) and a 4-year guarantee is provided.



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feeding

## Discharge augers

Various auger systems are available to transport the biomass out of the mixer into the digester, depending on the construction of the digester.



*Triple auger system for feeding into standing digesters.*



*Single auger system for feeding into semi-sub soil digesters.*



*Standing auger system for feeding into sub soil digesters.*

mixing

## Stationary mixers



loading

## Stationary mixers...

The same technology used in the Biogas feeding plants mixers is used for stationary mixers. Stationary mixers offer the possibility to use the more economical feed boxes with less horse power to distribute the feed. The mixers run at a reduced constant Rpm as opposed to mobile mixers, and full clean out can be arranged through a gearbox or by way of a variable drive. All mixers are built on a subframe and supports can be ordered to put the machine at the desired height. Accessories like discharge and elevating conveyors, pump and valve kits to open doors are available to create a turnkey solution.

cutting



*Trioliet: Invents for you.*

# Stationary mixers Feeders for Biogas plants

## Technical Data

Model Solomix 1	1000	1200	1400	1800
<b>Suitable for</b>	<b>feed/biogas</b>	<b>feed/biogas</b>	<b>feed/biogas</b>	<b>biogas only</b>
Discharge	one discharge door in operation			
<b>Capacity</b> m <sup>3</sup> ./Cu. Ft	<b>10/350</b>	<b>12/430</b>	<b>14/500</b>	<b>18/630</b>
Overall length m./Inch*	3.32/130"	3.43/135"	3.70/146"	3.70/146"
Width m./Inch	2.29/90"	2.29/90"	2.44/96"	2.44/96"
Height m./Inch*	2.45-2.75/96-108"	2.65-2.95/104-116"	2.70-3.00/106-118"	3.29-3.59/130-141"
Net weight kg./Lbs**	3.080/6,770	3.230/7,110	3.830/8,430	4.230/9,310
Maximum load kg./Lbs	5.000/11,000	6.000/13,200	7.000/15,400	9.000/19,800
Number of knives per auger	5	5	9	9
Diameter of auger m./Inch	2.20/87"	2.20/87"	2.44/96"	2.44/96"
Feed: E-motor required (6p + variable speed drive) kW***	22	22	30	-
Biogas: E-motor required (4p + reduction gearbox) kW***	22	22	30	37

\*Height of bottom of tub is 2 ft./0,6 m. \*\*Deadweight = excl. support legs and electric motor \*\*\*Rated electric motor power valid to maximum load capacity

Model Solomix 2	1200	1600	2000	2400	3000	3200	4000
<b>Suitable for</b>	<b>feed/biogas</b>	<b>feed/biogas</b>	<b>feed/biogas</b>	<b>feed/biogas</b>	<b>biogas only</b>	<b>feed/biogas</b>	<b>biogas only</b>
Discharge	one discharge door in operation						
<b>Capacity</b> m <sup>3</sup> ./Cu. Ft	<b>12/430</b>	<b>16/560</b>	<b>20/715</b>	<b>24/860</b>	<b>30/1,050</b>	<b>32/1,150</b>	<b>40/1,400</b>
Overall length m./Inch*	4.21/166"	4.60/181"	5.20/205"	5.72/225"	5.72/225"	6.56/259"	6.56/259"
Width m./Inch	2.15/85"	2.29/91"	2.44/96"	2.44/96"	2.44/96"	2.80/110"	2.80/110"
Height m./Inch*	2.55-2.84/101-112"	2.84-3.13/112-123"	2.84-3.13/112-123"	2.77-3.06/110-121"	3.36-3.66/132-144"	2.75-3.05/108-120"	3.35-3.65/132-144"
Net weight kg./Lbs**	3.920/8,630	4.960/10,915	5.440/11,970	6.570/14,460	7.200/15,840	8.510/18,725	9.240/20,330
Maximum load kg./Lbs	6.000/13,200	6.000/13,200	10.000/22,000	12.000/26,400	15.000/33,000	16.000/35,200	20.000/44,000
Number of knives per auger	4	5	5	6	6	9	9
Diameter of auger m./Inch	1.50/59"	1.70/67"	1.96/77"	2.20/87"	2.20/87"	2.66/105"	2.66/105"
Feed: E-motor required (6p + variable speed drive) kW***	30	45	45	55	--	90	--
Biogas: E-motor required (4p + reduction gearbox) kW***	22	37	37	2 x 22	2 x 22	2 x 30	2 x 37

\*Height of bottom of tub is 2 ft./0,6 m. \*\*Deadweight = excl. support legs and electric motor \*\*\*Rated electric motor power valid to maximum load capacity

Model Solomix 3	4600	6000	8000
<b>Suitable for</b>	<b>feed/biogas</b>	<b>biogas only</b>	<b>biogas only</b>
Discharge	two discharge doors in operation		
<b>Capacity</b> m <sup>3</sup> ./Cu. Ft	46/1,650	60/2,150	80/2,850
Overall length m./Inch*	8.63/340"	8.63/340"	8.63/340"
Width (without E-motor) m./Inch	2.97/117"	2.97/117"	2.97/117"
Width (with E-motor) m./Inch	3.93/155"	3.93/155"	3.93/155"
Height m./Inch*	2.88-3.18/114-125"	3.48-3.78/137-149"	4.34-4.64/170-183"
Net weight kg./Lbs**	12.340/27,150	13.230/29,110	14.290/31,440
Maximum load kg./Lbs	23.000/50,600	30.000/66,000	40.000/88,000
Number of knives per auger	9	9	9
Diameter of auger m./Inch	2.44/96"	2.44/96"	2.44/96"
Feed: E-motor required (6p + variable speed drive) kW***	110	--	--
Biogas: E-motor required (4p + reduction gearbox) kW***	3 x 37	3 x 37	3 x 45

\*Height of bottom of tub is 2 ft./0,6 m. \*\*Deadweight = excl. support legs and electric motor \*\*\*Rated electric motor power valid to maximum load capacity



### Standard version

The standard machine has one or two discharge door(s) one, two or three planetary drive mixing augers suitable to be driven by an electric motor, Support legs and two manually controlled counterblades. The discharge door is located directly opposite the drive side.

### Accessories

Electric motor(s) (safe from explosion) (4-pole) 22 to 45 kW, electronic weighing system, digital or analogue control signal, supports, electric remote control and hydraulic pump unit.

Trioliet reserves the right to make changes in design and specifications, or to add new features without obligation on implements before or after such changes are made.



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