Digester

Digester contents: m3
Eggshaped/conical-cylindrical-conical
New build/reorganized
(attach sketch FB, or relative elevations in accordance with questionnaires settle)

Mixer

Driven by three-phase motor, for on the right of and left hand motion designed. steal-welded motor lantern, with flexible clutch as connection to the mixer shaft, with seating ring, the mixer runner with splash disc, special propeller/s and the guide disk. All pass and seat faces mechanically shaped.
Forced circulation of the digester with the ascending pipe arranged concentrically to the mixer. **Mixer in self safe design in accordance with standard 94/9/EG dated 23.04.1994 (ATEX).** With bearing temperature monitoring and wiring on common terminal box in ex-execution. The following, intrinsically safe electric circuit with barriers and signal processing are by others executed.

Make:	Träxler, or equivalently
Type:	
Rate of flow:	m3/h
Speed:	min-1
Digester circulations:	min.6 per day with continuous operation by obligation circulation over tubing.
Direction of rotation:	right and left
Power demand:	KW
Power density:	KW/m3
Spraying diameter:	mm

Seating ring

The seating ring is manufactured in welded structure. With adjusting screws for the assembly in the upper flange. A gas tight seat has to be provided. The seat ring carries the thrust and guide bearing of the mixer runner. Bearing temperature is monitored by inserted temperature sensors. Bearings are lubricated over individual fat lines made of stainless steel 1.4571 by an electrical grease pump. The gas-tightness to be provided by lip sealings with fat collecting main achieves. The shaft sleeves at the sealing position are hardarmored. The armouring is mold with the base material. Furthermore a splash disc is fastened with smallest gap to the bearing housing on the shaft, in order to prevent squirting mud upward to the entrance into bearings to protect the bearings.

Runner

The runner consists of a shaft made of 52 - 3 steel, with special propellers made of St 52 - 3, a guiding disc made of cast iron GG 25, and a splash disc made of steel St 37. The special propellers are executed with wear resistant blades because of the abrasiv constituents of the mud.

The shaft is spherically shaped at the lower end because of flow resistance. The runner have to be balanced after the assembly statically and dynamically.

The natural frequency of the runner is situated under 0,8 x operating speed, or over 1,3 x operating speed. The proof is to be led across the program MADYN and documented.

If the mixer is built into a gas hood / a mixer support plate, the natural frequency of the gas hood / mixer support plate have to be considered.

Lubrication mechanism

The supply of the both bearings takes place via an automatic, electrical fat lubricating pump, which is driven by an three-phase motor 0.18 KW, 1330 min-1, IP 55, explosion protection E EX e II T4.

The fat lubricating pump has discharge openings. 2 discharge openings for bearing lubrication and 2 further for the sealings. Tank capacity 5 kgs.

The monitoring of the fat level is made by a inductive switch with its self save relay for ex-zone 1, which is built in the switchgear cabinet.

The monitoring with level reed switches S or K is not permitted.

Grease pump with mobile grease pump filling device for 25 kg storage vessels. The filling is made by hand pump and hose connector with check valves.

Driving motor

Make:	VEM, AEG, Schorch, or equivalently
Type:	
Size:	
Rated speed:	
Rated output:	
Design:	V1 with roof
Protection:	P 55
Explosion protection:	EEx e II T3
Voltage:	400 V
Frequency:	50 cycles per second
Weight:	kgs

Ascending pipe

Ductile cast iron pipe: DN
Intake and outlet bellmouth made of GG 25 or GGG. All connecting bolts made of stainless steel.

Support frame for ascending pipe

Support frame made of Steel St 37 - 2, with 3 strong legs with ascertainable joint feet intended. The attachment takes place and will be fixed with two components plastic dowels.

Spanners

4-fold spanning, spanning cables ø 12 mm made of stainless steel 1.4401, joint execution made of stainless steel 1.4571, execution of the bracing with ever 2 rope locks, ascertainable with pins.

If the distance to the septic tank wall will be below 3 m, also a bar bracing from 1.4571 is admissible.

Direct contacts of the bracing cable with removing wall tie disk or tubing are not permitted because of the danger of fracture.

The supply for the spanners also includes the anchoring plates at the wall. The attachment of the anchoring plates will be fixed with two components plastic dowels. The anchoring plates and all mounting materials made of stainless steel 1.4571 / A2.

Painting

In the digester: Inertol - Poxitar painting
Sandblasting SA 2 1/2

Primer:	1 x Frizinc R
Top coat:	3 x Inertol - Poxitar in the change black-red-black

Air-touched sections: Icosit-painting
Sandblasting SA 2 1/2

Basic coating:	1 x Friazinc R
Intermediate coating:	2 x Icosit EG
Cover coating:	1 x Icosit EG 5, colour is communicated

Weights:

Mixer, engine:	kgs
Ascending pipe and support:	kgs

Total price: Euro

Gashoods for digester top

one strengthened, oscillations absorbing, gas hood DN for anaerobic sludge-mixers.

Since gas hood and mixers form a unit and the proof of firmness and view of natural frequency in the connection is to be seen, it must be insisted on the fact that gas hood and mixers are supplied from the same supplier.

Because of the dynamic loads and in case of occurring oscillations by foreign body, it is absolutly necessary that the seat of the gas hood and the seat of mixer in the gas hood, has to be shaped mechanically.

In case of this process, both flanges are situated flat one on the other.

Rough ones, gas hood flanges with flat gaskets, because of the indirect strength and oscillation transfer into the building, are not permitted.

The sealing must take place here with an O-ring, which is let in in a mechanically processed groove.

Gas hood make: Traexler
material: stainless steel 1.4571

For the basement of the sludge mixer, consisting of:

1 gas hood seat flange made of stainless steel 1.4571, seat face mechanically shaped, with O-ring-groove and mounted O-ring, flange thickness after shaping at least 30 mm,
1 sealing flange, mechanically shaped, flange thickness after shaping at least 30 mm,
1 curved disk DN Wall thickness to DN 2000 = 10 mm, to DN 2500 = 12 mm over DN 2500 = 14 mm. Disk welded into sealing flange.
1 central, mechanically shaped mixer seat flange with O-ring sealing (casting made of two components of plastic between mixers and gas hood is not permitted)

Gas hood with all necessary reinforcements also at transitions to the flange, the ribs are to be welded constantly, the curved disk into the sealing flange one welds Hood also

2 windows with welding trim made of stainless steel DN with windshield wiper
1 gas dome, flanged, dismantlable, DN with gas outlet DN
1 pressure protection valve (working as syphon), flanged, dismantlable
2 connecting pieces for foam probes spraying mechanism and mixer direction of rotation change
2 foam probes for the control of spraying mechanism and mixer direction of rotation
6 connecting pieces for pressure tight executions
1 spraying mechanism for surface-moderate spraying with at least 6 nozzles inclusively. Single solenoid valve for ex-zone 1.

The gas hood seat flange is fastened on the septic tank top fixed with two components plastic dowels.
The gas tightness is secured by two components plastic filling between concrete and gas hood seat flange.

All sections welded together, pickled, neutralized, flanges drilled all seat and sealing surfaces mechanically shaped.

Weight for gas hood seat flange and gas hood kgs

Total price for 1 set: Euro