BIOGASTECHNIK SÜD

SEPOGANT

Screw press separator

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Sepogant is a screw-press separator for dewatering liquid manure, digestate or other substrates. The basic unit of the Sepogant consists of a rugged grey cast iron housing with side covers located at both sides and the connecting flange for the hopper tank, pressure sensor or other auxiliary equipment.

The substrate inlet nozzle is flange-mounted on the right-hand side and the press water outlet nozzle on the bottom side. The compression tube is located at the transition to the counter-pressure unit.

The counter-pressure unit is optionally available in combination with a counter-pressure cone or a counter-pressure flap. The compressed air assembly makes the Sepogant basic unit complete. The robust press screw pushes the substrate through the rigidly mounted, fixed cylindrical screen basket, squeezing it against the counter-pressure cone or flap. This causes the liquid phase of the substrate to run off through the screen basket. The solid phase of the digestate is pushed against the counter-pressure device and discharged at the front end of the Sepogant.

Technical Data

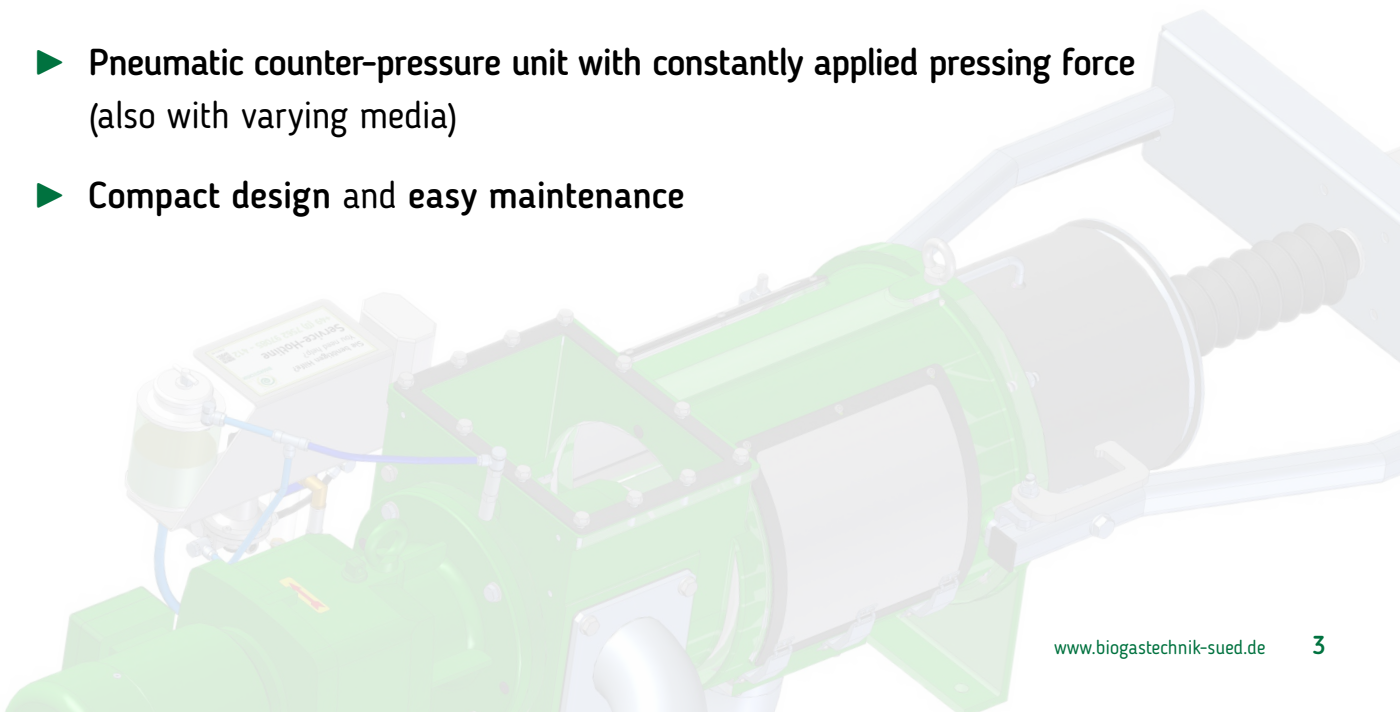
Main drive	Spur gear motor
Driving power	2.2 kW [optionally up to 5.5 kW]
Input speed	24.0 rpm [optionally 37.0 rpm]
Electrical connection	400 V AC, 50 Hz
Oil quantity in the gear motor	3.0 l
Press screw	Stainless steel (V2A), 8 mm thickness, carbide-reinforced, with mechanical seal
Oil quantity in the press screw bearing	1.5 l
Screen basket	Stainless steel (V2A) with 0.5 mm [optionally with 0.25 mm, 0.75 mm or 1.00 mm]
Discharge control	Pneumatic cylinder, continuously variable
Connections	Four-hole flange DN 100 with transition to eight-hole flange DN 100
Empty weight	Approx. 395 kg
With optional hopper tank	Approx. 495 kg
Max. dry-matter content of press cake under standard conditions	Up to 33 %

Scan QR code

For more information
and videos!

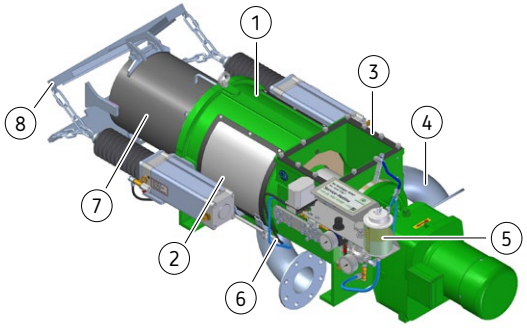
Advantages

- **Long service life of the screw** due to carbide tipping
- Excellent and reliable performance even **with problematic substrates**, such as long-fibre farmyard manure or plastic proportions in the waste area
- **Service performance of the screw** up to 350k m^3
- **Energy-efficient**, since the electrical connected load of the motor is only 2.2 kW or 3.0 kW [optionally 5.5 kW]
- **Breakthrough-proof** with compressed-air system and monitoring of charge and discharge times by means **of level probe inside the hopper tank**
- Also **operational in sub-zero temperatures**, as the control unit features a frost protection function
- No **clogging of feed section even with** long-fibred matter
- **Low maintenance effort and high safety** due to durable and long-time proven mechanical seal (permanent oil lubrication)
- **Low maintenance cost**
- **Pneumatic counter-pressure unit with constantly applied pressing force** (also with varying media)
- **Compact design** and **easy maintenance**

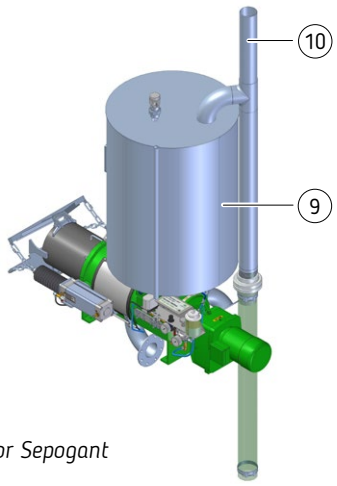


Design with counter-pressure flap

1. *Grey cast iron housing*
2. *Side cover*
3. *Connecting flange for hopper tank / pressure sensor*
4. *Connecting flange for substrate*
5. *Compressed-air assembly and oilreservoir for bearing unit with mechanical seal*
6. *Outlet nozzle for press water*
7. *Compression tube*
8. *Counter-pressure unit (with flap)*
9. *Hopper tank 400 litres*
10. *Vent hopper tank*



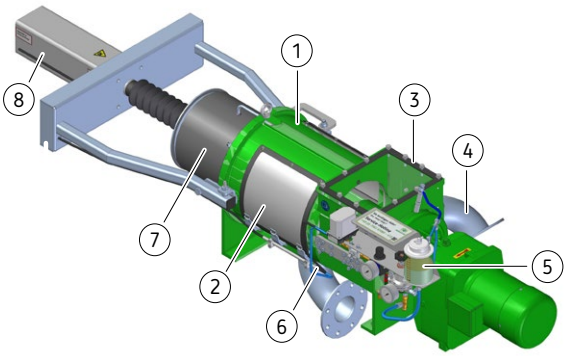
Sepogant with flap



Option for Sepogant

Design with counter-pressure cone

1. *Grey cast iron housing*
2. *Side cover*
3. *Connecting flange for hopper tank / pressure sensor*
4. *Connecting flange for substrate*
5. *Compressed-air assembly and oil reservoir for bearing unit with mechanical seal*
6. *Outlet nozzle for press water*
7. *Compression tube*
8. *Counter-pressure unit (with cone)*
9. *Hopper tank 400 litres*
10. *Vent hopper tank*

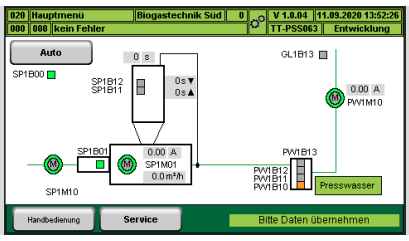


Sepogant with cone

State-of-the-art

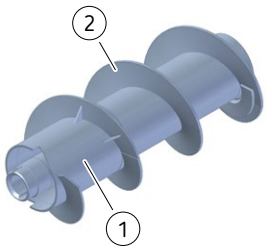
B&R touch display control

- *Fully automated control of separator with pumps*
- *Function monitoring of entire plant*
- *Modular design*
- *Easy operation (also via W-LAN)*
- *Remote access via app or PC*
- *Energy evaluation*
- *and much more*

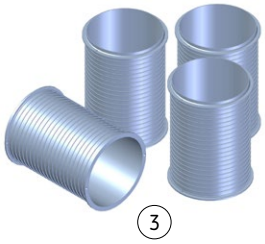


Materials used

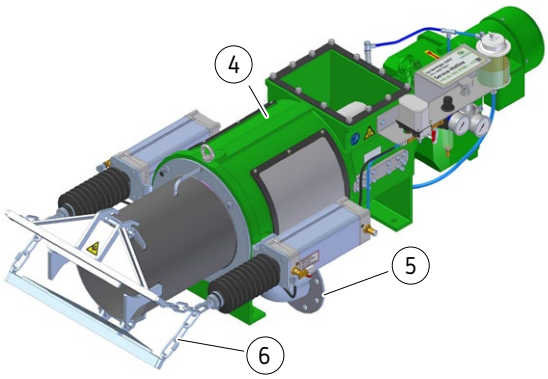
1. *Press screw, stainless steel*
2. *Carbide-reinforced*
3. *Cylindrical screen basket, stainless steel*
4. *Housing, painted grey cast iron*
5. *Nozzle, galvanized steel*
6. *Counter-pressure device stainless steel*



Press screw



Screen basket



Sepogant (with flap), press screw, screen basket and drive

Technical Data

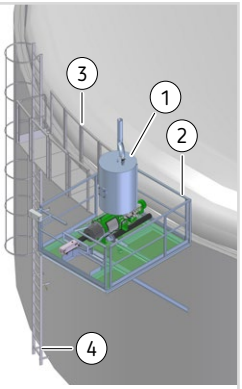
Hopper tank; 0.5 mm screen basket	Standard, energy-saving				Long-fibred, highly viscous substrates and high DM contents			
DM content, solids (in %)	26	26	32	32	29	29	33	33
Max. throughput with cattle slurry/digestate (in m³/h)	6	12	5.5	11	6	12	5.5	11
Max. throughput with pig slurry up to 5 % DM (in m³/h)	9	18	8	16	9	18	8	16
Driving power	2.2 kW	3.0 kW	3.0 kW	3.0 kW	3.0 kW	3.0 kW	3.0 kW	5.5 kW
Counter-pressure device	Cone	Cone	Cone	Cone	Flap	Flap	Flap	Flap
Screw	Single	Double	Single	Double	Single/ long	Double/ long	Single	Double
Screen attach (only with short screw)	No	No	Yes	Yes	No	No	Yes	Yes

Pressure control; 0.5 mm screen basket	Standard, energy-saving				Long-fibred, highly viscous substrates and high DM contents			
DM content, solids (in %)	26	26	32	32	29	29	33	33
Max. throughput with cattle slurry/digestate (in m³/h)	11	22	10	20	11	22	10	20
Max. throughput with pig slurry up to 5 % DM (in m³/h)	17	24	15	24	17	24	15	24
Driving power	2.2 kW	3.0 kW	3.0 kW	5.5 kW	3.0 kW	5.5 kW	3.0 kW	5.5 kW
Counter-pressure device	Cone	Cone	Cone	Cone	Flap	Flap	Flap	Flap
Screw	Single	Double	Single	Double	Single/ long	Double/ long	Single	Double
Screen attach (only with short screw)	No	No	Yes	Yes	No	No	Yes	Yes

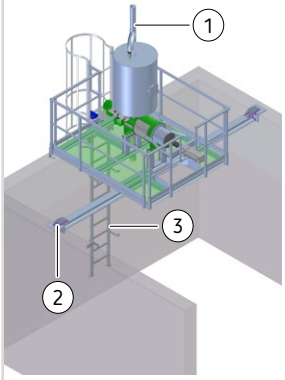
Option: Platforms

The platform with side access is available for different tank wall heights and ladder lengths. The platform passage way is located on the left in the standard version (optionally also on the right).

1. *Sepogant with hopper tank*
2. *Platform with side access*
3. *Platform passage left (optionally right)*
4. *Ladder*

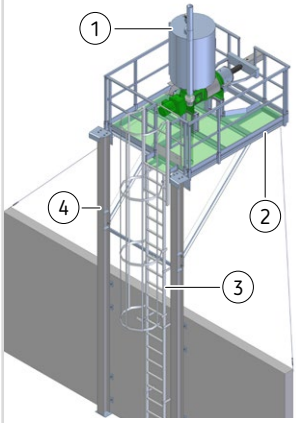


Platform with side access on the left attached to a digestate storage tank



1. *Sepogant with hopper tank*
2. *Wall support*
3. *Ladder*

Platform with wall support



1. *Sepogant with hopper tank*
2. *Platform with rear access*
3. *Ladder*
4. *Platform support*

Platform with rear access at sustaining wall

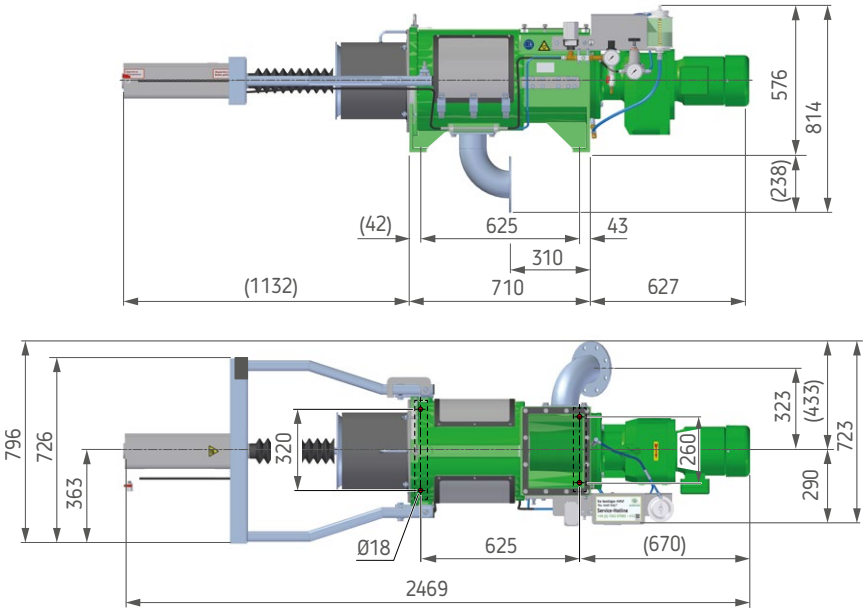


Figure 1

Dimensions with counter-pressure cone

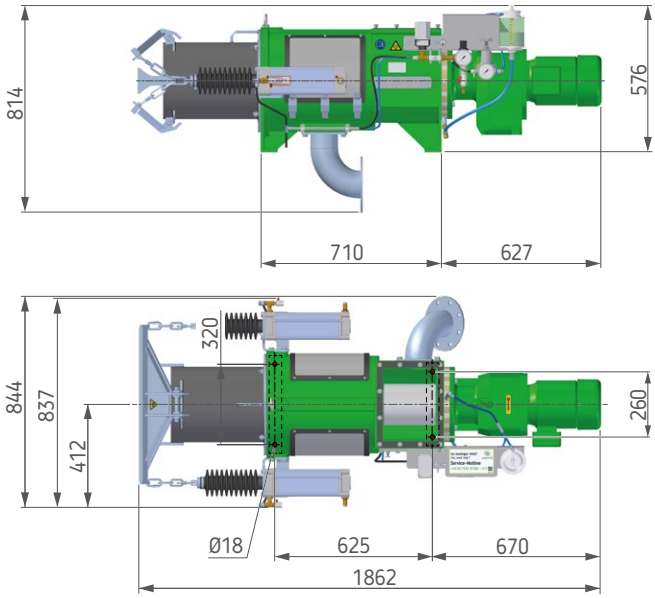


Figure 2

Dimensions with counter-pressure flap

Screw press separator

SEPOFARM MODULE

Our Sepogant in modular design can be installed very easily and quickly in just a few steps. It is mounted on concrete blocks next to which a specially designed dual-use container for solid/liquid transport can be placed. This makes it possible to collect the separated material in this container with very little effort and transport it to another location.

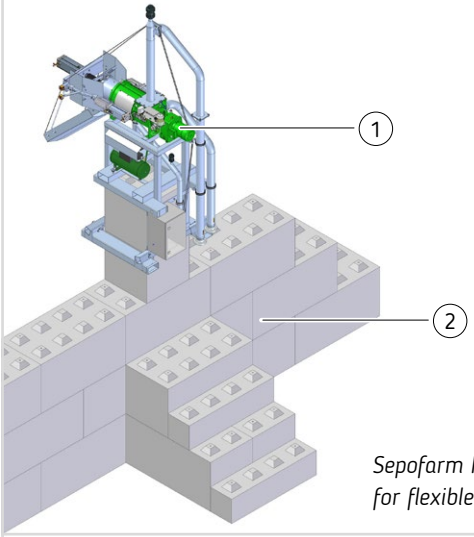
This allows the farmer even to generate money from the solids in his slurry and manure by selling it to a biogas plant. The liquid digestate can be discharged into the farmer's pit.

After the solid material has passed through the process in the biogas plant, it is returned to the farmer as a liquid portion on the way back. This means that there are no empty runs. Optionally, by using our Vapogant digestate evaporator, ammonium sulphate (ASS), which is used as fertilizer, can be obtained.

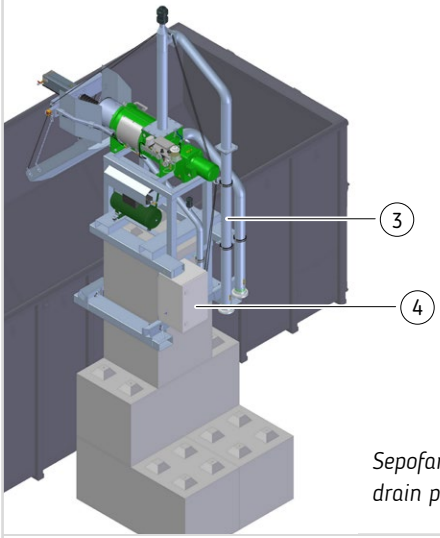
In addition to the increase in profit, the possible storage reduction should also be seen as an advantage. Furthermore, CO_2 and space savings can be achieved. The module is flexible in use and the biogas plant operator can use the substrate as a substitute for renewable raw materials (e.g. maize). The functions of the system are monitored, switching off automatically when the dumping height is reached.

Design

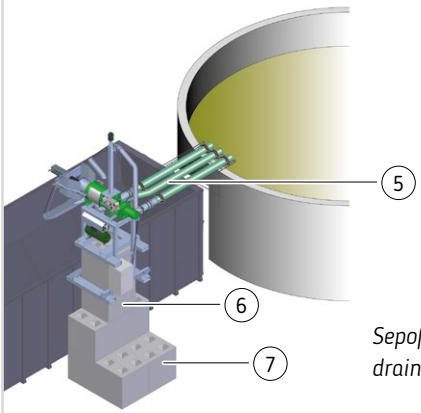
1. *Basic unit*
2. *Example of installation: Wall of concrete blocks without container (dumping height up to 5 m possible)*
3. *Drain piping downwards*
4. *Control cabinet*
5. *Drain piping at the top*
6. *Example of installation: concrete block 800 x 800 x 800 mm*
7. *Example of installation: concrete block 1600 x 800 x 800 mm*



Sepofarm Module for flexible use



Sepofarm Module with drain piping downwards

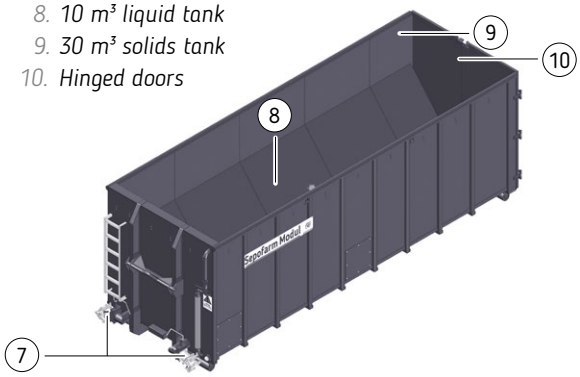


Sepofarm Module with drain piping at the top

Dual-use container: Optionally available

Specially designed dual-use container for solid/liquid transport

7. *Filling/draining port for liquids*
8. *10 m³ liquid tank*
9. *30 m³ solids tank*
10. *Hinged doors*



Technical Data

Sepofarm Module basic unit with attached Sepogant screw press separator

Weights & Dimensions

Including connection piping	Approx. 800 kg Basic unit, overflow tank
Including connection piping, control cabinet, empty hopper tank	approx. 920 kg Basic unit, hopper tank
Concrete block, small	800 x 800 x 800 mm 1200 kg
Concrete block, medium	1600 x 800 x 400 mm 1200 kg
Concrete block, large	1600 x 800 x 800 mm 2400 kg
Specially designed dual-use container (solids / liquids)	7425 x 2525 x 2590 mm With these dimensions we recommend a drop height of 3200 mm

Various eccentric screw pumps (horizontal/vertical) in the power range of 4 - 5 kW are available for configuration.

Screw press separator

SEPOGANT COMPACT

We developed the Sepogant Compact screw-press separator as an alternative to our stationary Sepogant screw-press separator. With a few simple actions, the compact separator is ready for operation in no time at all. After use, it is just as easy to make the unit ready for transport again.

The Sepogant Compact can therefore be used in various places. This solution is ideal for contractors that use the unit across several sites. The compact system comprises all components needed to run autonomously. A feed pump sucks in the substrate. After it has passed through the Sepogant, a press-water pump pumps off the liquid phase of the substrate to a suitable location. The solid phase can be dumped straight onto a trailer. This is a fully automated process which is controlled by safety functions through the central control cabinet.

The basic unit of the Sepogant Compact separator is the same as that of our stationary Sepogant unit.

Completely ready-to-use unit for mobile application

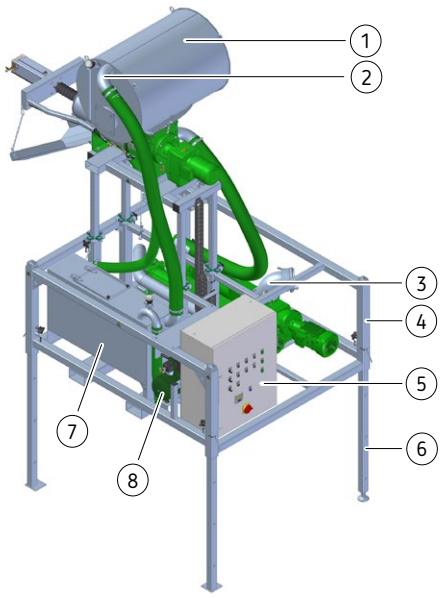
Set up - Connect - Switch on

Separate!

We always have demonstration and rental equipment available!

Design

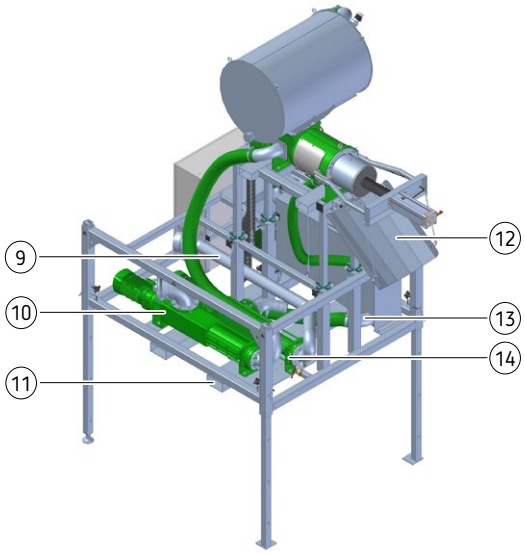
1. *Hopper tank*
2. *Venting pipe to press water tank*
3. *Suction pipe connection*
4. *Frame*
5. *Control cabinet*
6. *Adjustable foot*
7. *Press water tank*
8. *Compressor*



Front side

Design

9. *Press water connection*
10. *Substrate pump*
11. *Entry bars for forklift trucks/wheeled loaders*
12. *Substrate guide plate*
13. *Suction hose to press water tank*
14. *Press water pump*



Rear side

Technical Data

Dimensions	
Transport (LxWxH)	2572 x 1992 x 2572 mm
Operation (LxWxH)	3433 x 1992 x 4734 mm
Weight	
Empty weight (depending on design)	1600 - 1800 kg

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