

BIOSOLIDS

Digelis® Simplex

Steel tank anaerobic digester



**Steel construction:
durability and simplicity**

⇒ **Durability**

Patented Verinox® steel construction

⇒ **Simplicity for design & operation**

**A unique construction process, fast,
efficient and flexible with steel coils
automatically assembled in a spiral**

The Digelis® Simplex is a construction method without welding or bolt applicable to mesophilic and thermophilic anaerobic digesters with or without an integrated gasholder, having capacities of up to 7,000 m³ per tank.

This method is implemented for 50 years by our partner

More than

1,000 units

made by this type of assembly

Compact version with an
integrated gasholder



Version without an
integrated gasholder

The Digelis® Simplex technology ...

The tank construction is carried out directly on site on a concrete slab by winding around a circular structure, stainless Verinox® steel coils ①. To ensure the reactor's tightness, the steel coils are folded together (Lipp Double-Seam system). This fast and efficient construction method is comparable to a screw that advances with each completed turn, the reactor rises and takes shape.

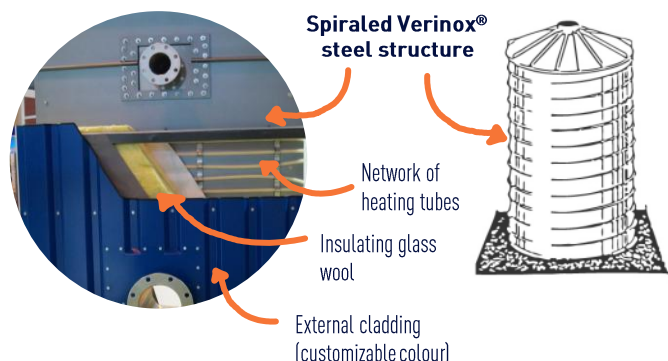
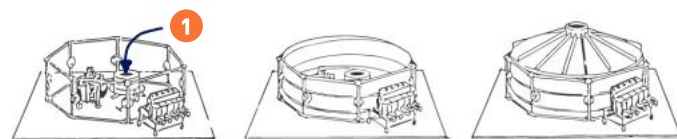
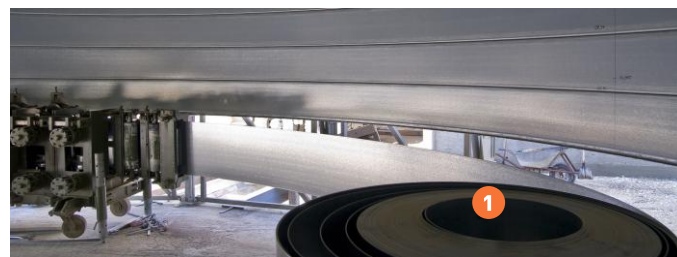
Mixing the sludge inside the reactor is carried out mechanically, limiting the ATEX constraints inherent to conventional biogas mixing systems. Coupled with a recirculation pump, this patented system enables the surface level to be swept regularly, thereby preventing crust formation.

Optionally, a network of water-heated tubes, which maintain a uniform temperature in the anaerobic digester, is integrated into the outer wall between mineral wool insulation panels and the Verinox® steel structure.

This configuration:

- improves the system's durability,
- maintains heat transfer efficiency,
- and eliminates the need for an external heat exchanger.

An outer cladding protects the overall system.



... what it can do for you

Modularity and operability

- Maintenance of the mechanical agitation system, without emptying the digester
- Heating system integrated into the external walls of the reactor (optional), therefore easily accessible
- Modular components: mixing, gasholder, pressure, heating

Safety

- Steel tank eliminates the risk of corrosion that can be experienced with concrete
- Mechanical mixing: no biogas compressor so fewer ATEX constraints

Competitiveness

- Reduced construction times thanks to the in-situ design of the patented spiral reactor
- Civil engineering limited to a simple concrete slab
- Sludge heating system that eliminates the need for an external exchanger

Maximum strength & watertightness

- Construction of the reactor in patented Verinox® steel
- Binding of the edges of the steel coils together using the patented Lipp Double-Seam system



Among our references

Sausheim (Mulhouse), France

1 x 5,100 m³

Roanne, France

2 x 3,100 m³

Boneo, Australia

2 x 2,500 m³

Panama city

1 x 5,000 m³

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