

To make the chicken manure into a commercial product requires a higienization according to European Parliament and Council Regulation (EC No. 1774/2002). Pure sludge is also suitable for to treat in this system if not to wet.

Through our experience on drum composting our customers have contacted ECSAB on an alternative higienization solution of pure chicken manure without adding of other structure materials.

Chicken manure is a difficult waste to compost as a concentrate, which the nitrogen content is too high with the result of a strong ammonia precipitation. We have chosen to use the steam that is a very effective and economical way to achieve the desired temperature for higienization by at least 70 degrees Celsius for at least one hour under current EU regulation.

Quantor@SX is a scalable system according to customer needs. Delivered turnkey on-site.

Documenting temperatures.

The temperature logged and measured at four points corresponding to the requirements.

The temperature should be at least 70 degrees for one hour to reach higienization. The amount of steam trimmed with electric valve on steamers output and fine-tuned manually on higienization tube for the right distribution via needle valves.

	Tid	Temperatur 1	Temperatur 2	Temperatur 3	Temperatur 4
264	2015-01-15	72	74	85	69
265	2015-01-15	69	78	79	66
266	2015-01-15	69	78	79	62
267	2015-01-15	70	78	78	62
268	2015-01-15	70	78	78	61
269	2015-01-15	70	78	78	61
270	2015-01-15	71	78	80	63
271	2015-01-15	71	79	80	63
272	2015-01-15	72	80	80	64
273	2015-01-16	74	80	80	66
274	2015-01-16	75	82	81	67
275	2015-01-16	74	82	82	67
276	2015-01-16	76	82	83	68

Specification data.

Hygienization systems casing is made of stainless steel.
 This plant handle about 5 m3/day corresponding to the manure quantity of about 40 000 poultry.
 Steam is injected with up to 140 degrees and up to 6 bar pressure if necessary.
 The outer shell is insulated as well as an extra safety/out feeding device keeps the material warm for extra 30 minutes longer, and the steam are contained effectively in the system using this function.



Input Device

The door is winched up manually on the buffer and are filled with chicken manure. This is done once to twice per day. The manure falls down with a stirrer and lands of the screw and is fed slowly through hygienization tube under steam pressure. The process is closed until the outfeed guillotine door opens automatically.



Steam boiler

We have chosen to work with standard products from Swedish Osby Parca. Investing in a boiler Osby Parca is a long term investment - life expectancy up to 25 years is not unusual. Robust, efficient boilers, extensive controls and a known service organization are some of Osby Parca hallmark. The equipment in an insulated 20-foot container with lighting, ventilation and heating.



MCC

A switchboard equipped with PLC and touch screen, and all other equipment for the low and high power. PLC and the screen can be accessed via VPN from the outside and the alarm is automatically sent to mobile phones via SMS by your own delivered SIM card and also alarm via flash light outside the container. The storage temperature can be downloaded via USB at the back of the screen. All basic settings are made on site, but can also be done remotely for access to software (not restart and restore the safety relay).

