



Special points of interest:

- **Gasification makes all poultry industry waste extinct safely and locally**
- **PowerCan® 200 produce electricity, heat and fertilizers from poultry waste**
- **PowerCan® 200 is a movable Plug and Play operation**
- **SOLIDEA Group technology makes poultry waste profitable**

Solidea Group Publications

<u>Products</u>	2
Cells and Modules	
<u>Projects</u>	6
Development, Finance, Fields, Commercial Installations, PV&CHP	
<u>BiPV</u>	4
Design, Procurement, Installation, New Products	
<u>Lighting</u>	2
Street and Public Transport Utilities, PPP, SSL's	
<u>Consulting</u>	3
Project and Cost Management, Due Diligence, Design Management, Handover, Employer and Lenders Representative, Expert Facade Service	
<u>Distribution</u>	8
Country Profiles	
<u>Corporate Social Responsibility</u>	1
Humane Projects	

PowerCan® 200 Broilers Litter

“PowerCan® 200 safe gasification systems turning mixed broiler litter into electricity and heat?”

PowerCan® 200	200kWe + 260kWh Power Pack
Feedstock Composition	12:1 Biomass to Manure
Typical Broilers Farm	720 tons in 80 days/9 tons per day
Conversion to Fuel	1 ton feedstock >280l fuel
Heat Temperature	Hot water is supplied 80-120C
Feedstock Process	Negative Pressure in Chicken house
Ideal Feedstock Form	<25% Moisture
PowerCan® 200	Consumes 4 tons <25% daily Producing 1 ton fertilizer daily
CAPEX Payback Period	Typically <2 years
Products	Electricity, Heat and Fertilizer
Uses	Energy, Heat, Sanitization, Waste Extinction, Defeathering
Delivery/Commissioning	Delivered Plug and Play
Disposition	Movable 20ft container [2.4 x 6.0m]
Parasitic Energy Consumption	<4% of total [all ratings are Net] so Parasitic Energy is included
Physical Size	PowerCan® 200 1 x 20ft container Gasifier Operated outside of the
Output/Scale	PowerCan® 200 200kWe+260kWh Large broiler operations can export fuel pellets or produce Deisel



PowerCan® 200 uses broiler litter as feedstock
PowerCan® 200 is a 200kWe + 260kWh off the shelf gasification power pack providing convenience, safety and a neat local energy solution for the poultry farmer.
How PowerCan® 200 Works
PowerCan® 200 gasifies feedstock locally safely reducing what goes in to trace elements and with no emissions. Gasification conveniently converts broiler litter to Syngas using state of the art gas reform technology. Syngas is then cooled and converted to run CHP [combined heat and power]

Broilers Litter
Over 20 Billion chickens worldwide are raised for meat they are called Broilers. Broilers grow from young chicks to meat for the table in 40 to 80 days weighing between 2 and 4kg. Broilers feed to weight ratio is between 2 and 2.5 depending on feed type and captivity conditions. A typical Broiler farm has up to 20,000 chickens. Broiler litter starts life as straw and shavings ending as manure mix of approximately 12 litter parts to 1 part of manure.

Processing Broiler Manure and Bedding
Fine cut dry straw and dry sawdust mix ultimately makes an ideal PowerCan® 200 feedstock. Ground, trimmed dried straw absorbs manure creating a fluid dry mix for gravity feeding.

Plug and Play PowerCan® 200
PowerCan® 200 are built into and shipped in standard 20ft steel shipping containers [2.4m x 6.0m] plug and play. PowerCan® 200 is operational within hours of delivery, being moveable relocating PowerCan® 200 takes only a few hours, add pelletizing units and FT systems right away or later. PowerCan® 200 adds value to the broiler industry

“With Multiple feedstock capability PowerCan® 200 provides the Poultry industry a complete safe waste extinction program”

WtE produces a fertilizer
Broiler litter is classified as waste, in most countries it is illegal to incinerate litter for heat or to use it as a livestock feed. PowerCan® 200 Gasification makes Broiler Litter extinct leaving behind a residual ash consisting of only pure trace elements. PowerCan® 200 residual ash make excellent fertilizers.

Broiler Litter Extinction as Income
PowerCan® 200 is different from other systems because it makes waste extinct using only a fraction of the energy it produces. Unlike other systems PowerCan® 200 considers broiler waste a valuable commodity. All specifications are net ratings after parasitic consumption. PowerCan® 200 provides electricity, heat and fertilizer even of grid.

Variable Feedstock
SOLIDEA's off the shelf modular systems consumes all waste from broiler related production including, manure, litter and feathers. PowerCan® 200 consume all types of Poultry waste including all those produced at the slaughter house, distribution related MSW, plastics and all types of packaging. Many types



of farm and forest waste can become feedstock it means PowerCan® 200 excellent value added.
PowerCan® 200 Integration
The PowerCan® 200 can be integrated into any Poultry production full cycle to make process and product related wastes extinct. Integrating PowerCan® 200 locally delivers electricity and heat locally. Many units can be added to scale up operations anywhere on and off grid delivery potential is unlimited.

Electrical Energy
PowerCan® 200 produces electricity 24hrs a day at 200kWh. Output comes from a continuous feedstock supply which can be fully automated. PowerCan® 200 systems are smart products supplied with the necessary software to operate and monitor the whole process via internet on any device. PowerCan® 200 systems standalone for Micro Grid generation as an energy hub ideal for isolated communities. PowerCan® 200 delivers local energy solutions with surplus to sell to the local grid. Making waste extinct locally reduces the risk and spread of infections associated with production

Heat Delivery
Heat is delivered at temperatures between 80-120 Degrees Celsius as pumped hot water. Heat is delivered for many purposes including temperature control, defeathering and sanitization. The ratio in CHP is 60% heat to 40% electrical energy.

Energy and waste extinction where its needed
PowerCan® 200 is built in movable modular units which can be relocated and added to as required.