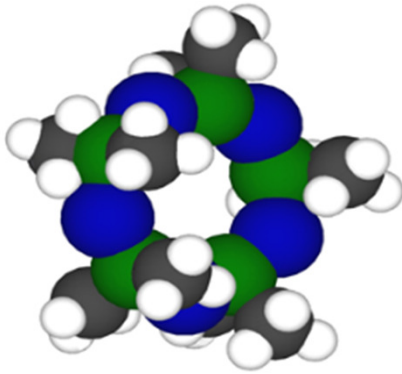
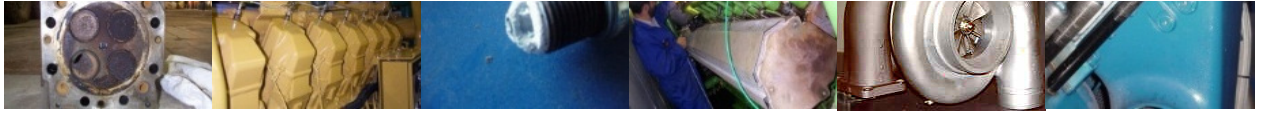


# Siloxane Removal Systems





## About PpTek

PpTek Ltd, a British owned company, was formed in 2000 after extensive work investigating the effects of Siloxanes and Volatile Organic Compounds (VOC's) in the Biogas to Energy industry.

PpTek Siloxane Removal Systems are now fitted to many Landfill and Sewage Treatment Works across the UK, Europe and the World.

Low costs, small footprint and filter media that lasts up to 5 years in addition to good ROI has made PpTek systems a leader in the Siloxane removal market place.

## Siloxane contamination

Recent years have seen an increase in the use of siloxane-containing products in our lives, a substantial amount passing through to waste products both in sewage and landfill sites.

As the gas produced from these sites is used to power Biogas-to- Energy units we see a substantial increase in siloxane contamination, in the form of crystalline Silicon dioxide building up on the combustion surfaces of generating engines.

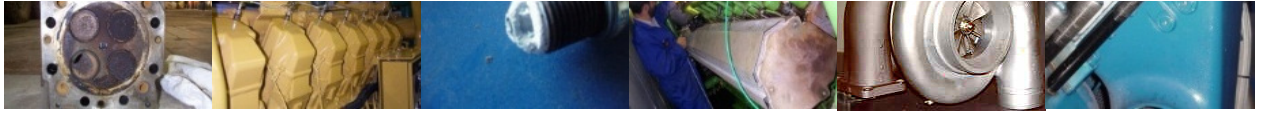
In addition to damage to engine components, affected engines run inefficiently producing excessive emissions particularly of carbon monoxide and NOx. The result is increased operating costs, decreased electricity production and increased pollutants. PpTek has developed several solutions to these challenges that have a short payback time.



*Silicon deposits on a head & valves causing a collision between valves and piston crown*



*A piston coated in deposits*



## ***The solution :***

### ***Automatic Regeneration Siloxane Removal Units***

The *BioGas AK* tackles the cause at source using a biochemical medium to capture siloxane molecules allowing a free flow of clean gas to the engine.



The skid mounted, microprocessor controlled unit uses one of two parallel housings to clean the gas, capturing the contaminants in the media.

As the on-line housing becomes saturated with siloxanes and other contaminants, the gas flow is automatically redirected to the other housing. The first is then regenerated automatically whilst the flow of gas continues through the second housing uninterrupted to the engine.

Simple, compact, robust, self contained & regenerative, the system enables extended full-power operation, increased service intervals and payback within an operating period as short as 12 months.

Depending on the levels of contamination, the change over and regeneration cycle will be programmed to take place every 12 – 24 hours



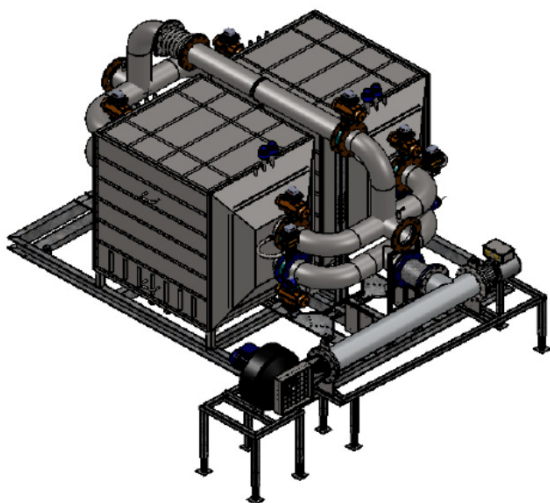
On a site with average levels of contamination the PpTek media will last five years, requiring a minimum of servicing, significantly reducing downtime and the constant removal and disposal of contaminated media.

**PpTek offer a true long-term solution to contaminated land fill and sewage gas, enabling an operator to maximise power generation and extend scheduled maintenance periods.**



## Automatic Regeneration Units : BGAK 400 - 5000

Model	Layout	Size	Max Gas Flow Nm <sup>3</sup> /hr	Approx weight
BGAK 400	S	3.8m L x 2.0m W x 1.8m H	350	950 kg
BGAK 600	L	5.7m L x 1.9m W x 1.6m H	700	1,600 kg
BGAK 600	S	4.6m L x 3.4m W x 1.6m H	700	1,600 kg
BGAK 1200	L	5.7m L x 1.9m W x 1.6m H	1,400	1,600 kg
BGAK 1200	S	4.6m L x 3.4m W x 1.6m H	1,400	1,600 kg
BGAK 2000	L	5.7m L x 1.9m W x 2.1m H	2,100	1,800 kg
BGAK 2000	S	4.6m L x 3.4m W x 2.1m H	2,100	1,800 kg
BGAK 3000	L	5.5m L x 2.5m W x 1.9m H	3,500	2,300 kg
BGAK 3000	S	4.3m L x 3.9m W x 1.9m H	3,500	2,300 kg
BGAK 4000	L	5.5m L x 2.5m W x 1.9m H	3,500	2,300 kg
BGAK 4000	S	4.3m L x 3.9m W x 1.9m H	3,500	2,300 kg
BGAK 5000	L	5.5m L x 2.6m W x 2.2m H	4,200	2,800 kg
BGAK 5000	S	4.7m L x 3.9m W x 2.2m H	4,200	2,800 kg
BGAK 5000E	L	7.2m L x 2.1m W x 2.2m H	4,200	2,800 kg
BGAK 5000E	S	5.8m L x 3.2m W x 2.2m H	4,200	2,800 kg



Automatic 'S' Layout example

### Features

- Low on-going maintenance costs
- Media guaranteed for 5 years
- Media Hydrophobic
- Skid mounted
- Microprocessor controlled
- Small outline and footprint
- Filter media automatically regenerated
- Stainless steel construction
- Environmentally safe
- No filter medium disposal cost
- Multiple fail safe detection features
- ATEX approved CE compliant (Zone 1 or 2)
- Optional Modus TCP/IP connection
- Optional Remote GSM monitoring
- Optional Vent Air Burner (VAB – Mini Flare)
- Installation under pressure or suction