



CLEAN OIL  
BRIGHT IDEAS

# CJC™ Biogas Filters

For Land Fill Sites & Sewage Treatment Works

## CJC™ Product Sheet

### BIOGAS CONTAMINATION

Biogas contains high levels of contaminants i.e., siloxanes, organic compounds and water which, if allowed to reach the engine, will cause irreversible damage to both engine components and engine oil.

#### Symptoms are:

- High TAN values
- Low TBN values
- High Si values
- Engine detonation due to high water content
- High Incidence of SiO<sub>2</sub> erosion/abrasion
- Damage to cylinder heads, liners, piston rings etc

### WHY FILTER YOUR BIOGAS?

You can save money, increase productivity and profitability by lowering operational running costs. This can be achieved by extending engine oil (and filter) life, replacing fewer spark plugs, cylinder heads etc, which will secure longer service and overhaul intervals. You can also achieve lower engine exhaust emissions as engines will burn cleaner gas.

Cleaner Biogas means Longer Engine Life

### CUSTOMER BENEFITS OF USING CJC™ VOC BIOGAS FILTER SYSTEMS

- Highly cost effective
- Payback within months
- Lease or rental options
- Low operating costs
- CJC™ managed option with full maintenance package
- Removes most VOC's and VMS's from biogas stream
- Versatile placement in biogas pipeline
- Small footprint
- Proven, safe design and construction
- Gas sample points before / after filter
- No parasitic energy requirement
- Minimal pressure drop
- Environmentally friendly
- Simple installation/servicing
- Indoor/outdoor installation
- No planning requirements
- Reduces engine maintenance costs
- Extends engine service / overhaul intervals
- Prolongs engine oil life
- Helps reduce engine emissions
- Extends engine component life i.e., heads, valves, plugs etc.

### WHERE TO INSTALL THE CJC™ BIOGAS FILTER IN YOUR BIOGAS SUPPLY?

- Larger filters in main gas feed pipes.
- Smaller filters in branch pipes to single engines or groups of engines.



Spark plugs, 2 weeks old



Valves



Cylinder Head



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### HOW CAN YOU SECURE A LOW BIOGAS CONTAMINATION LEVEL

A CJC™ Biogas Filter will remove more than 90% of the contaminants in the gas supply.

The CJC™ Gas Filter Medium will successfully capture and retain, through adsorption, the following potentially damaging compounds:

- Siloxanes
- Hydrogen sulphide (H<sub>2</sub>S)
- Halogenated compounds (chlorines and fluorines)
- Organo sulphurs (sulphur compounds)
- Water (H<sub>2</sub>O)



CJC™ VOC 127/80DB Biogas Filter

### TECHNICAL FEATURES OF THE CJC™ BIOGAS FILTERS

The selection of the correct CJC™ Biogas Filter will depend on the gas flow rate and the type and level of contamination in the gas.

#### Our current range includes:

- **The CJC™ VOC DB (Deep Bed) Series**  
Ideal for **smaller** installations or engines with gas flows rates between 50 m<sup>3</sup>/hr and 1,500 m<sup>3</sup>/hr.
  - CJC™ VOC 57/57 DB
  - CJC™ VOC 127/80 DB
  - CJC™ VOC 127/160 DB
  - CJC™ VOC 127/160 DB LF (low flow)
- **CJC™ VOC AB (Annular Bed) Series**  
Ideal for **larger** engines or installations with gas flow rates between 1,000 m<sup>3</sup>/hr and 6,000 m<sup>3</sup>/hr.
  - CJC™ VOC 41/200 AB
  - CJC™ VOC 107/200 AB

We advise that the CJC™ VOC Biogas Filters should be used in conjunction with CJC™ HDU Off-line Fine Filters in order to maximise engine oil life.

### SYSTEM DIAGRAM

