

# SILOXANE REMOVAL TECHNOLOGY "SRT" SYSTEM



With DCL's SRT System, treated biogas can lead to substantially higher income for plant operators.



DCL's SRT System is an advanced gas pre-treatment and purification system that is designed to remove harmful siloxanes from the gas supply.

## Benefits of DCL's Regenerative SRT System

### Less Maintenance and Repair

5-10x less frequent oil, oil filter and spark plug exchange, 3-5x less frequent complete engine overhauls, no constant replacement of catalytic converters, far less frequent cleaning of the heat exchanger and silencer.

### No Increased Backpressure & No Loss of Power

Without SiO<sub>2</sub> build-up in the exhaust system, engines and turbines will not experience increased backpressure levels which can result in loss of power and lower electrical output.

### Less Downtime

Engines running on biogas without siloxane removal can experience additional downtime of 30-50% beyond regular maintenance. Engines running with treated biogas or natural gas are expected to be online more than 95% of the time.

### Meet Emissions Regulations

In conjunction with DCL manufactured catalytic emissions reduction products (SCR, oxidation or three-way catalysts), the SRT ensures compliance with stringent environmental regulations i.e. SCAQMD 1110.2.

## What is Siloxane? << SILicon OXYgen alkANE >>

Siloxanes are a group of man-made organic compounds that can differ in composition. They are frequently found in cosmetic and personal hygiene products, health care, food ingredients, plastics and other industrial products.

Increased usage leads to increased presence in landfill and wastewater processing facilities. When biogas containing siloxanes is combusted, i.e. in a boiler, turbine, generator, or CHP unit, silicone dioxide (SiO<sub>2</sub>) particles – essentially sand – are created and contaminate engine and exhaust components downstream.

Typical damage includes:



Abrasion and wear

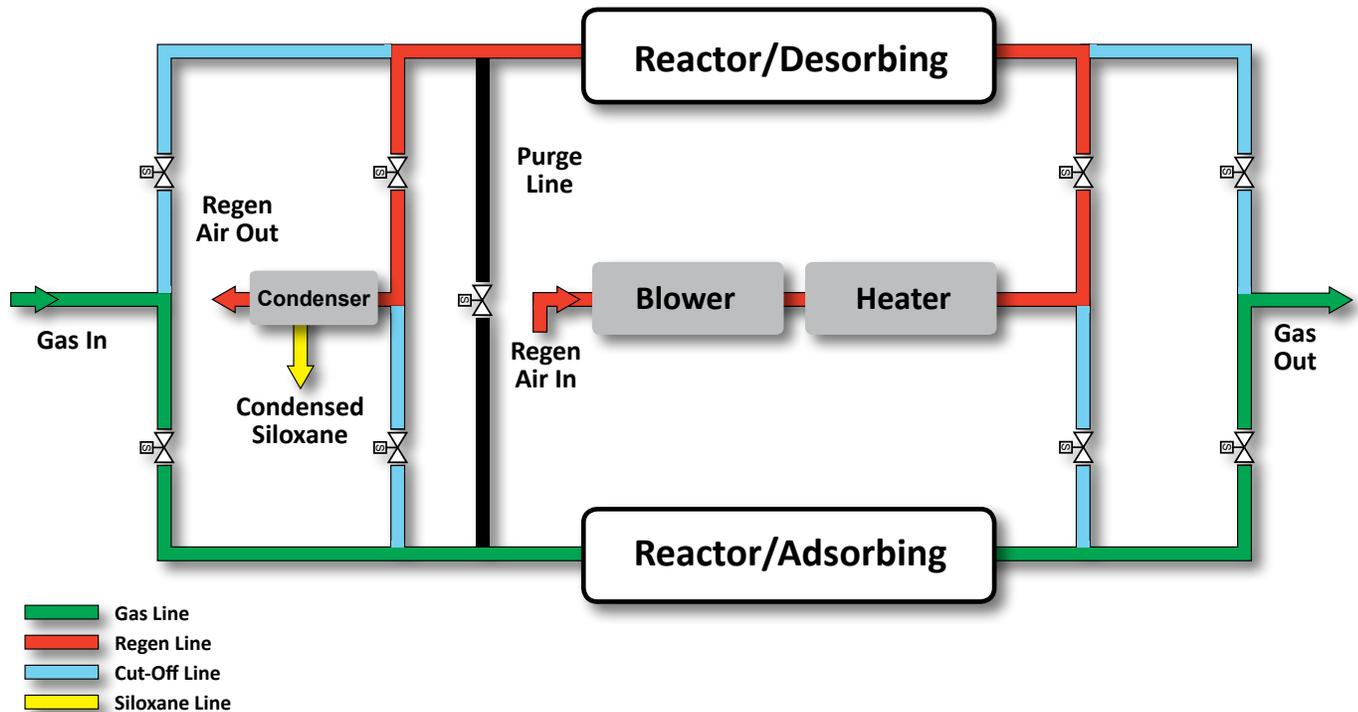


Coating and plugging of valves, spark plugs, pistons, cylinder heads and catalytic converters

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## The DCL Concept



## Features of DCL's SRT System

DCL's SRT System stands alone as a cost effective, high efficiency siloxane removal technology and ensures protection of downstream power and heat generation applications. Manufactured with high quality stainless steel materials and its proprietary removal media, DCL's SRT System meets and exceeds industry standards.

Flexible in its compact layout, DCL's SRT System can be delivered in a vertical package to further minimize its footprint, or horizontal for ease-of-access. With DCL's SRT System, there is no annual downtime or media changeover and less frequent maintenance required to maintain consistent and effective gas cleaning properties.

## Advantages of DCL's SRT System

- Greater than 99% siloxane removal efficiency
- No water removal or chiller required
- Polymer media self-regenerates
- Very low energy requirement or parasitic load
- No engine damage through media possible
- Customized and compact design with a small footprint
- Modular design delivered in ready-to-connect skids; capable of effortless expansion
- Lower installation and operating costs and longer lifespan
- Near-zero gas loss; flaring not required