

# Industrial Catalytic Converters



## **MINE-X<sup>®</sup>** Catalytic Converter

*Gas Compression | Power Generation | Co-Generation | Fluid Pumping*

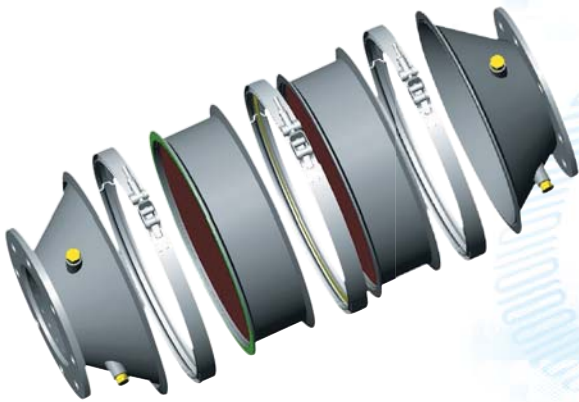
# MINE-X<sup>®</sup>

## Catalytic Converters for Industrial Engines

MINE-X<sup>®</sup> catalytic converters effectively reduce engine exhaust emissions from internal combustion stationary engines, including NO<sub>x</sub>, CO, hydrocarbons, formaldehydes and particulates. MINE-X<sup>®</sup> catalytic converters are ideal for engines 700 HP (520 kW) and smaller, in applications such as gas compression, power generation, co-generation, irrigation and pumping stations, air compressors, and CNG refueling.

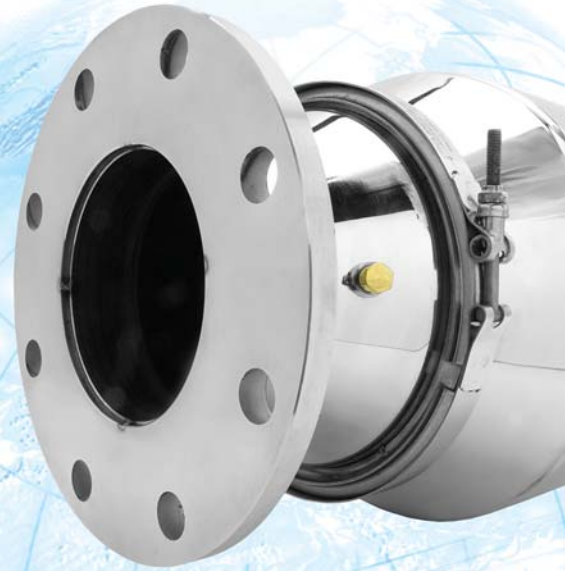
MINE-X<sup>®</sup> catalytic converters contain a number of features that make it rugged and a reliable for small and medium industrial engines. The metal foils are vacuum brazed directly to each other and the outer shell to prevent telescoping due to engine vibrations and thermal expansion stress from high temperatures.

A variety of catalyst types are available including, three-way catalyst for rich burn engines, oxidation catalyst for lean burn engines and diesel oxidation catalyst for diesel engines.



## Modular Design

DCL's modular system provides design flexibility for genset and compressor packagers. Additional catalyst elements can be added for areas with more stringent emission standards.





# Custom Design

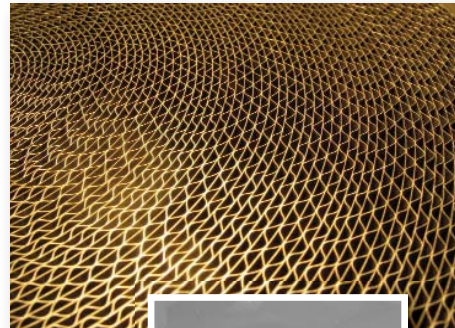
DCL's modular designs can be configured as catalytic silencers. An example of a custom designed catalytic silencer is shown below.



### Emission Test Results\*

NOx (oxides of nitrogen) 4 ppm  
CO (carbon monoxide) 23 ppm

\*Post catalyst emissions as ppm (dry) @ 15% O2. Compressor with Caterpillar 3306 NA, measured January 9, 2009.



Brazed  
Joints

# Brazed Catalyst Elements

DCL's brazing process involves oven treatment in a high temperature, low pressure, inert atmosphere. This results in the metal foils forming a fused alloy with each other. The fused joints create a single solid substrate unit resistant to mechanical shock and telescoping.

## Features

## Benefits

Brazed metal substrate	Eliminates telescoping, loosening or cracking of the catalyst honeycomb. Prevents plugging and nesting due to thermal expansion.
Modular design	Easily accommodates more catalyst elements. Allows quick upgrade if moving the engine to a more stringently controlled air-quality district.
Quick-release clamps	Allows for easy field servicing of the catalyst element. Easy for mounting and installation.
Ultra-thin metal foils	Increases the interior void space, which results in lower backpressure.
Heavy-gage stainless steel construction	Resists damage due to thermal and mechanical stress.
Various monitoring ports	Provides accessibility for checking emissions, backpressure and temperature.
Custom Connections	Virtually any type of connection available, including ANSI and DIN flanges.
Highly active catalyst coating	DCL catalyst coatings are backed by performance guarantees. Available in three-way (NSCR) and oxidation coatings.

# DCL International Inc. – Preserving and Improving the Quality of the Air We Breathe

DCL International Inc. is a global leader in the engineering, manufacturing and supporting of advanced emissions control technology for stationary and mobile industrial engines. Our products – which include oxidation and three-way catalysts, silencers, particulate filters, SCR systems and accessories – are used worldwide in the material handling, construction, mining, gas compression and power generation markets.

DCL's dedicated industrial focus is unique in the emissions control industry. To meet the specialized needs of the industrial market, we adopt an integrated approach, bringing together product development, design, manufacturing and testing all under one roof. This single-source capability enables us to provide better engineered emissions solutions that deliver outstanding performance, longer life and lower cost of ownership. Our superior product quality has made DCL the choice of customers around the world.



■ *Manufacturing Facilities*

■ *Representatives*



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