

## Jenbacher Oxidation catalyst upgrade for lower emission requirements

### Conversion, Modification & Upgrade

#### Product description

To address ever-tightening emissions regulations across the globe, INNIO\* continuously researches and develops solutions that help you achieve regulatory compliance. Our advanced oxidation catalyst upgrade package reduces the emissions of your Jenbacher\* gas engines that operate on natural gas, biogas, sewage gas, or coal mine gas.

This package helps you meet the latest regulations, including LAI-Bund/Länder-Arbeitsgemeinschaft für Immissionsschutz LAI resolution formaldehyde requirements as low as 20 mg/Nm<sup>3</sup> at 5% O-dry (in Germany) and formaldehyde incentive.

#### Product details

Based on your specific power plant design, the upgrade package is available in a basic configuration or with additional add-on options as required.

##### Basic package:

- Comprehensive design review to determine your plant's ability to mount additional catalyst material, as well as to evaluate pressure drop, flow, and engine full load capability related to the engine control's reserve
- Improved oxidation catalyst material for longer part life (design product lifecycle up to 16,000 operating hours)
- Mounting materials as required; These may include:
  - Flow strainers and sealing materials
  - Catalyst chamber and silencer mounting materials, such as gaskets and screws
- Commissioning
- Updated OEM documentation

##### Add-on options:

- New flow-improved and space-enhanced catalyst chambers
- Measurement devices (delta-p, Temperature in/out)
  - Changes to electrical hardware inside the control cabinets
  - Modifications to DIA.NE\* software controls
- System component installation and integration with the existing power plant
  - Mechanical components include panels, support structure, piping changes, and compensator
  - Electrical components include hardware mounting, wiring, and testing
- Comprehensive verification and testing of upgrade package integrations
- Turbocharger upgrade for reduced operational impact of additional backpressure
- Third-party emissions measurement analysis

##### Out of scope:

- Any permit changes
- Civil works (with the exception of the above optional add-on for the catalyst chamber support structure)

#### Customer benefits

##### • Complete OEM solution

Our consultants perform a thorough plant review to help ensure that the upgrade implementation meets the latest Formaldehyde and CO emission requirements (upgrade vs. shorter catalyst exchange interval). All upgrade implementations are fully tested and validated.

##### • Improved flow

Enhanced flow capability for longer catalyst life

##### • High flexible configurations

Due to our own design we have further possibilities to adapt the installation position based on your specific requirements.

##### • High efficiency

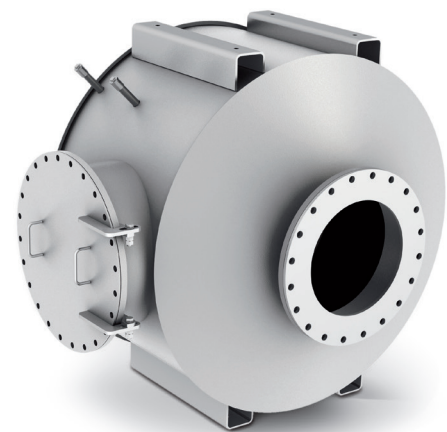
Low-pressure drop design curbs power deratings which can occur in higher ambient temperature environments.

##### • Reduced installation effort

Thanks to the compact system dimensions and the use of existing components, the upgrade package requires minor modifications to the system. This leads to a reduced installation effort.

##### • Service agreement coverage

Your new or existing maintenance agreements can be extended to include the oxidation catalyst upgrade package.

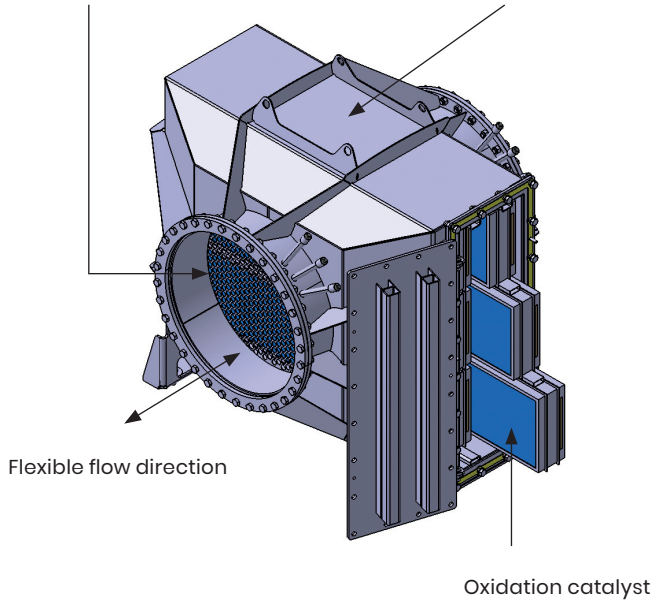




## High flexible configurations

Perforated plate at inlet for homogeneous flow distribution

Once installed, housing fits for various emission requirements



### Installation in a rectangular housing

- Easy oxidation catalyst installation from the outside
- Homogeneous flow distribution at the oxidation catalyst for enhanced lifetime
- Suitable down to CH<sub>2</sub>O limit of 20mg/Nm<sup>3</sup>@5%O-dry
- Deflagration safe design
- Oxidation catalyst safeguard by temperature and pressure monitoring

### Specifications for most typical Jenbacher gas engine types

	Back pressure	Dimensions
<b>J312</b>	<10 mbar	820x800x890 mm
<b>J420</b>	<16 mbar	900x800x1.220 mm
<b>J420</b>	<18 mbar	1.050x1.450x1.220 mm

### Applicable units

	Natural gas	Biogas	Special gas**
Type 2	✓	✓	✓
Type 3	✓	✓	✓
Type 4	✓	✓	✓
Type 6	✓	✓	✓
J624	✓		
J920	✓		

\*\*Sewage gas/Landfill gas, coal mine gas



INNIO\* is a leading solutions provider of gas engines, power equipment, a digital platform and related services for power generation and gas compression at or near the point of use. With our Jenbacher\* and Waukesha\* product brands, INNIO pushes beyond the possible and looks boldly toward tomorrow. Our diverse portfolio of reliable, economical and sustainable industrial gas engines generates 200 kW to 10 MW of power for numerous industries globally. We can provide life cycle support to the more than 48,000 delivered gas engines worldwide. And, backed by our service network in more than 100 countries, INNIO connects with you locally for rapid response to your service needs. Headquartered in Jenbach, Austria, the business also has primary operations in Welland, Ontario, Canada, and Waukesha, Wisconsin, US.

Find your local support online: [www.innio.com/en/company/providers](http://www.innio.com/en/company/providers)

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