



**UNIVERSAL**

*Acoustic and Emission Technologies*

# GAS TURBINE AIR AND EXHAUST TREATMENT SYSTEMS



*Turnkey Systems - New and Refurbishment*



*Inlet filtration and silencing*



*Exhaust emission treatment and silencing*

# SINGLE SOURCE SUPPLY FOR YOUR GAS TURBINE SYSTEM MAKES YOUR PROJECT EASIER.

## GLOBAL GAS TURBINE SYSTEM EXPERTISE

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Since 1959, Universal Silencer has designed, manufactured and supervised the installation of thousands of gas turbine systems around the globe. Our expertise includes firsthand experience with major turbine brands, including General Electric, Kawasaki, Nuovo Pignone, Pratt & Whitney, Rolls-Royce, and Siemens-Westinghouse. World-renowned, our resume includes turbine systems installed in locations such as Abu Dhabi, Venezuela, Brunei, and offshore platforms in the North Sea.

Whether you are looking to replace a current turbine system or install a new turbine system, Universal Silencer has the expertise to help. The air and exhaust needs for a turbine are quite complex. Those needs are noise reduction, inlet air treatment, minimization of back pressure, management of temperature, optimization of flow, structural integrity, project management, logistics, and emissions treatment. With one eye on customer needs and the other on its global capabilities, Universal Silencer is able to provide cost-effective turbine system design and production.

## COMPLETE SYSTEMS OR COMPONENTS—YOUR CHOICE!

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A turbine generator is a substantial capital investment. However, there is a precious balance between air filtration, noise reduction, emissions treatment and turbine efficiency. With Universal Silencer, a qualified and experienced team of engineers and system experts are available to optimally balance your air filtration, acoustic treatment and turbine efficiency requirements.

**The list of components we design, manufacture and install are:**

### Inlet Systems

- Inlet Silencers
- Pulse Filtration Systems
- Barrier Filtration Systems
- Anti-Icing Systems
- Inlet Cooling Systems
- Fogging Systems
- Transitions
- Ductwork

### Exhaust Systems

- Exhaust Silencers
- Diverter Dampers
- Structural/Support Steel
- Emissions Packages
- Bypass and HRSG Stacks
- Platforms/Ladders
- Plenums
- Expansion Joints
- SCR System
- 3-way Catalyst
- Oxidation Catalyst

*A 100 MW turbine exhaust system and support structure.*

*This 1 MW turbine system was installed in Brazil.*

*This 100 MW turbine system includes filtration and silencing components provided by Universal Silencer.*



# SINGLE SOURCE SUPPLY FOR YOUR GAS TURBINE SYSTEM MAKES YOUR PROJECT EASIER.


## TECHNICAL CAPABILITIES

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Universal Silencer has over 500 years of combined acoustic, filtration and emission experience from around the globe. We incorporate the latest software in design and manufacturing technology. If a standard product is not right for your application, we will design one! Universal Silencer also employs a Product Development Center to be on the cutting edge of the next technology breakthrough.

### What does this expertise give to your project?

- Site Surveys
- Advanced Acoustic Systems
- Advanced Filtration Systems
- Advanced Emission Treatment Systems
- Control Upgrades
- Turnkey Systems
- Enhanced Thermal Designs
- High Temperature Coatings
- Custom Design
- Engineering, Manufacturing and Project Management



*(Above) Universal Silencer incorporates the latest in design technology.*



*(Right) Always seeking the next generation of product enhancements, Universal Silencer is testing a new filter design in a cold stand.*


## TURBINE SYSTEM REFURBISHMENT PROJECTS

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Do you have a turbine system that needs updating or replacement? Universal Silencer is your single source for inlet and exhaust reconditioning. From site survey to commissioning, we have the experience and expertise to make this logistical nightmare easy for you.

### One single point of contact provides you:

- Site Survey
- Design Improvements
- Demolition
- Ductwork
- Stacks
- Air filter housings
- Enclosures
- Steel Support Structures
- Plenums
- Transitions
- Commissioning
- Project management



*(Right) This GE frame 7A Turbine system installed in 1980 had its exhaust and inlet system completely refurbished and upgraded by Universal Silencer in 2008.*

# GLOBAL REACH

Contact a global office for assistance in the design, manufacture and coordination of your turbine system air and exhaust needs.



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