



# Bypass Systems

Power Market

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## The Flexibility of a Bypass System with Diverter Damper

**WILL IMPROVE YOUR BOTTOM LINE**

Begin producing power sales sooner and avoid total plant shut down in the event of a heat recovery steam generator (HRSG) or steam turbine (ST) trip. A bypass system with diverter damper by Innova provides multiple levels of protection for your gas turbine.

Our patented design provides full protection, flexibility and time savings. It can also handle the harsh temperatures and velocities of any size of gas turbine. Built to perform and last, the system geometry is carefully fine-tuned to reduce turbulence and noise associated with its operation.



BYPASS SYSTEM FOR GE FRAME 7FA

## Benefits

- » Avoids unnecessary cycling during system trips to reduce wear and tear on the gas turbine
- » Reduces time to convert from simple to combined cycle
- » Minimizes construction costs
- » Permits multiple start-up scenarios
- » Avoids purchasing costly replacement power in the event of a HRSG or steam turbine trip
- » Designed for low pressure drop
- » Meets EPA non-cyclonic flow requirements

## Features

- » Higgott-Kane™ silencing system
- » Option of a fully actuated diverter damper, tee box with blanking plates or a retrofitable tee box
- » Patented seal land design to minimize heat loss
- » Electric/Hydraulic drive system options to suit your needs
- » Thermally compensating drive system
- » Redundant seal air system options

## Add-on Services

- » Acoustical consulting
- » Field technical assistance / installation
- » Retrofit available to any site worldwide
- » Commissioning

## Add-on Products

- » Turbine exhaust diffuser
- » HRSG system
- » SCR and CO catalyst systems
- » Acoustical buildings, barriers and enclosures
- » Expansion joints
- » Structural / support steel

## DESIGN SOFTWARE TOOLBOX

- Finite Element Analysis (FEA)
- Computational Fluid Dynamic Analysis (CFD)
- Autodesk Inventor, Revit, 3Ds max, AutoCAD
- CadnaA and in-house silencer acoustic modeling
- PTC Mathcad

## Engineering Competencies

- » In-duct flow and noise measurements
- » Exhaust system integrity analysis
- » Low frequency and vibration analysis
- » Scale model for flow simulation
- » Structural / mechanical design

## Leverage our Experience

Quality engineering and excellence is the backbone of every bypass system with diverter damper design. Critical components such as the blade and blade supports, toggle drive system, baffle support system and silencing baffles are engineered to provide long lasting dependability.

If constructing a simple cycle plant with plans for a later conversion to combined cycle, a bypass stack with diverterdamper is an economical way to start producing power sooner. Proven noise attenuation can be built into the bypass stack to ensure compliance to noise regulations and operational reliability of the diverter damper is key for quick problem resolution.



FULLY ACTUATED DIVERTER DAMPER

Whatever your needs are, our engineers can help you find the optimum solution, balancing capital costs, construction time/ costs and operational flexibility.



Balance Without Compromise™

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