

PROCESS AND EXHAUST GAS CONTROL SOLUTIONS

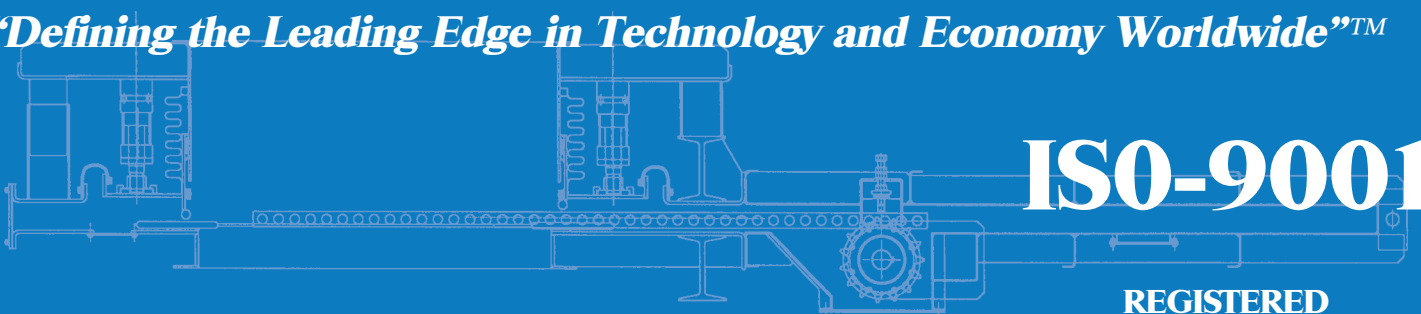
Gas Turbine Exhaust Systems,
SCR & FGD Bypass Systems,
Expansion Joints,
Utility and Industrial Dampers



BACHMANN



“Defining the Leading Edge in Technology and Economy Worldwide”™



ISO-9001

REGISTERED



Bachmann has earned a preeminent position in the competitive world market for dampers and expansion joints. We supply custom-engineered solutions for:

- Gas Turbine Exhaust Systems
- SCR and FGD Bypass Systems
- APC Damper Systems
- Petrochemical and Industrial Process Systems

The Bachmann team of dedicated engineers, designers, technicians, and craftsmen work closely with each customer to develop exceptional solutions to the most difficult challenges, whether technical or economic. This effort starts with the development of the initial design concepts, and continues through to site erection assistance and commissioning of the supplied equipment.

The innovative approach by the Bachmann team assures you will receive the most leading edge, reliable equipment appropriate for your specific applications.

Bachmann equipment currently operates on six

continents. No matter where in the world your project is located, Bachmann can be of service to you. No project is too distant or too big.

Whether your project is in the power generation, petrochemical, or industrial field, you can be assured that Bachmann will provide the quality damper and expansion joint equipment and service that have become the global standard.

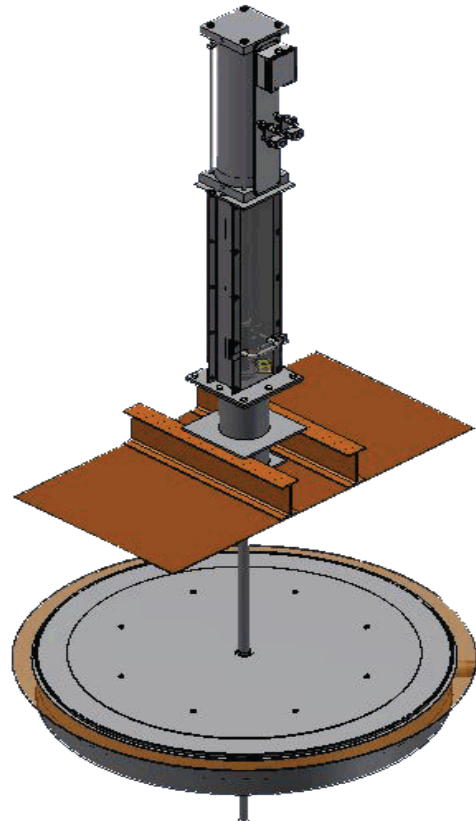
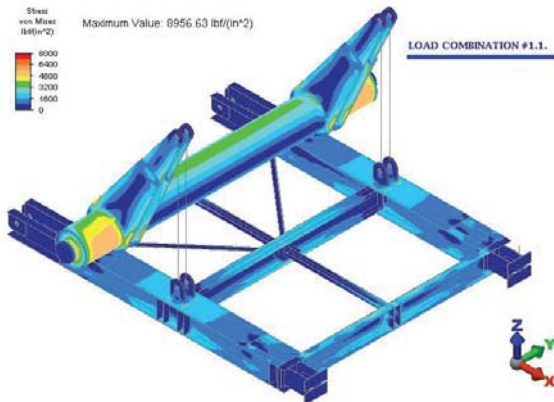
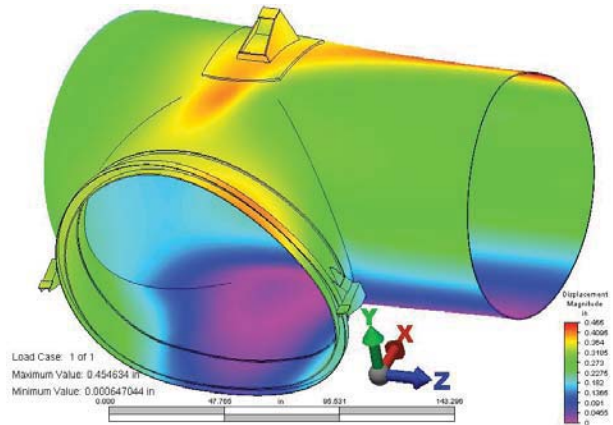
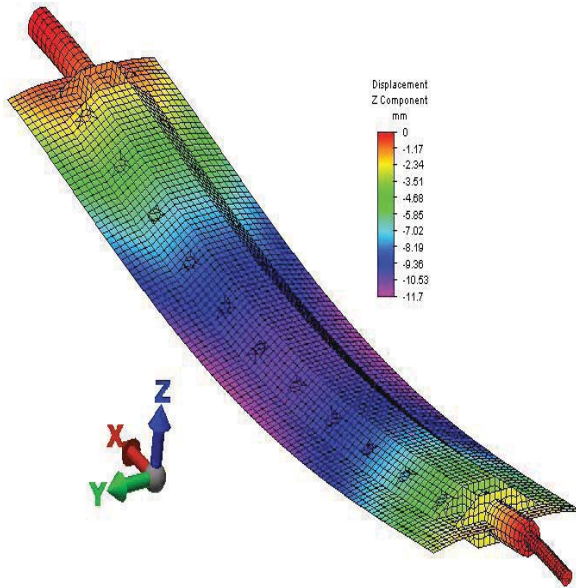
Bachmann is committed to providing customers the latest and most innovative technology. To ensure sound technology, we perform Finite Element Analysis (FEA) of our designs to confirm that they will meet or exceed each customer's expectations. Several examples of the analysis and 3D modeling performed by Bachmann can be seen here.

"Defining the Leading Edge"



BACHMANN™

and Expertise



"...Excellence with Experience"



Bachmann's Gas Turbine Exhaust Systems and Components provide a complete package of equipment, from the gas turbine exhaust flange to the HRSG inlet flange. Depending upon the client's specific requirement, the systems are supplied as entire units or as individual components.

- Diffusers
- Equalizers
- Transitions
- Diverters
- Expansion Joints
- Elbows
- Blanking Guillotines and Plates
- Duct Extensions
- Bypass Stacks
- Silencers
- Stack Dampers
- Louver Dampers
- Flap Dampers
- Guillotines

No matter the size of the gas turbine, Bachmann can provide the custom solution to your Gas Turbine Exhaust needs. We have provided equipment from the smallest to the largest gas turbines on the market today, throughout the world.



"Defining the Leading Edge"



Bypass system for a GE 9E gas turbine in Argentina



Diverter for a Siemens SGT6 - 4000F GT in Peru



Convertible simple cycle exhaust stack for GE 7FA in Venezuela

"...Excellence with Experience"



Bachmann's innovative, patented 4-Port Diverter system is an excellent solution for providing an SCR Bypass System.

This system is comprised of a self-contained housing with an inlet port from the boiler, an SCR bypass port, SCR return port, and an exit port to the air heater. The 4-port diverter contains only two (2) single blade flap dampers.

This diverter provides SCR online or bypass functions, with flow modulation and 100% isolation in the flap end positions. Since the flaps rotate out of the gas path, there is reduced system pressure drop and abrasion to the equipment in comparison to louver dampers.

In addition to the 4-port diverter system, Bachmann offers Flaps, Louvers, and Guillotines in their place. Each of these components is designed to stand up to the harsh environment of SCR service.

Bachmann offers a variety of solutions for SCR Bypass Louver and Guillotine dampers. The dampers can be supplied in a variety of alloys and seal arrangements to meet any application.

Above: SCR Diverter

(2.9 m / 9ft 6" wide by 20.4 m / 66ft 10" fl ap) with more than 20 workers standing on the flap. This diverter was later shipped and placed into service in the USA.



SCR Louver Damper

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The innovative Bachmann tandem seal design offers the best technical solution for FGD isolation at an economical price. The tandem seal design offers all of the advantages of the double louver damper but at a reduced initial cost, operating and maintenance cost.



FGD Double Louver Damper



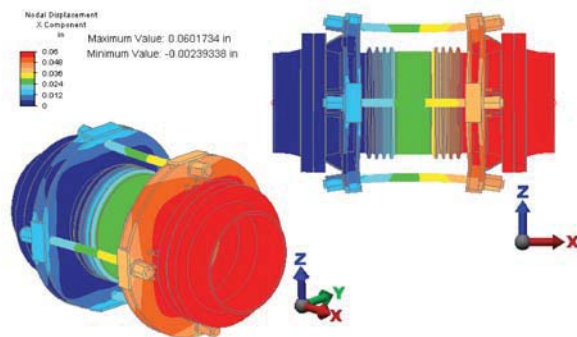
FGD Tandem louver seal

“...Excellence with Experience”



Bachmann's Metallic Expansion Joints are designed and manufactured in strict accordance with the EJMA Standards unless specified otherwise.

From simple flue gas breaching arrangements to the highly engineered designs required for refinery FCCU critical service, we have the necessary experience and talent, and can provide solutions for the most difficult expansion joint problems.



FEA of 914 mm (36") diameter Universal Expansion Joint



914 mm (36") diameter Universal Metal Expansion Joint for a cycle gas service. Inco 600 redundant ply testable bellows with root rings. 422 psig at 150°C (302°F)



3048 mm (120") square Hinged Refractory-lined Universal Expansion Joint for a refinery. Inco 600 bellows with rounded corners. 2 psig at 650°C (1200°F)

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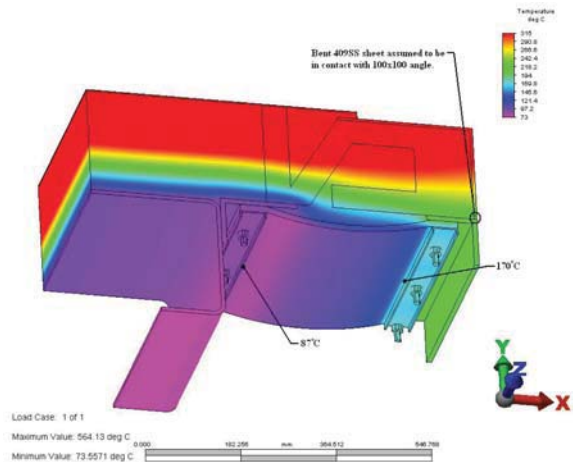


BACHMANN™

Fabric Expansion Joints



Bachmann's Fabric Expansion Joints provide a proven solution for tough applications. Each flexible element (molded flanges, flat belt, or diaphragms) is designed for the specified temperature and chemical environment. Each metal frame design (hot frame, cold frame, telescoping liner) has specific longevity and application advantages. Let our experts properly guide you to the best solution.



Heat Transfer Analysis of Gas Turbine Cold-to-Cold Fabric Expansion Joint

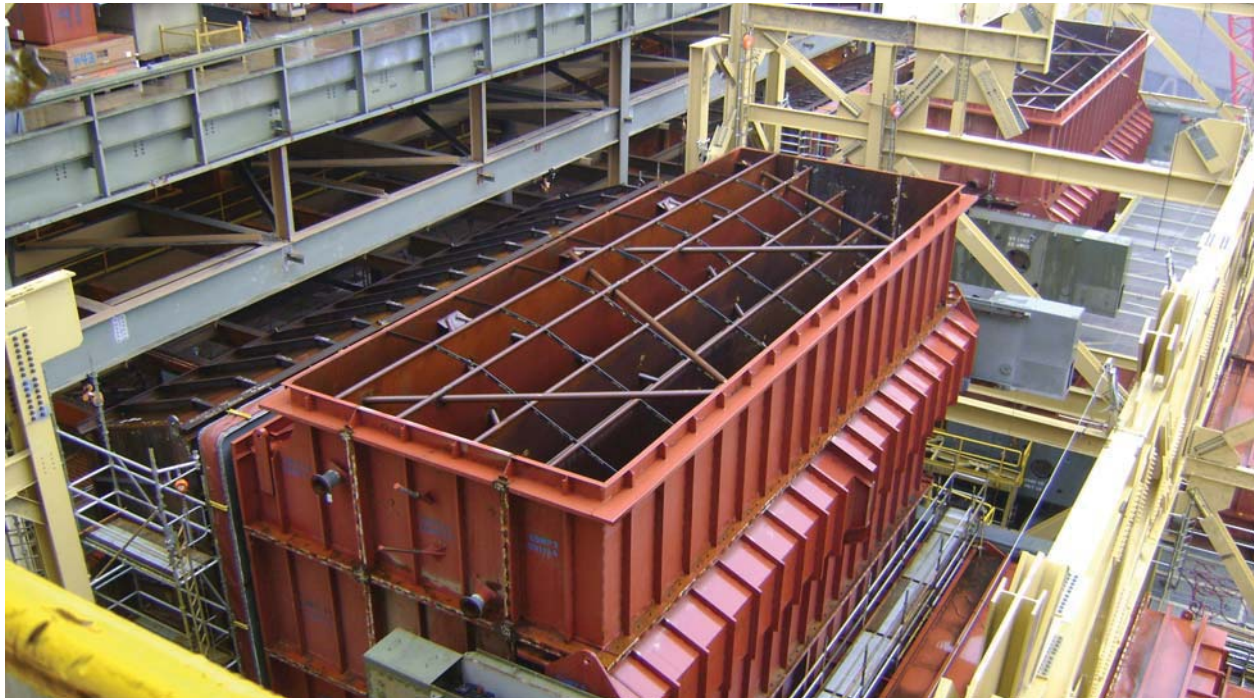


2260 mm (89") diameter Gas Turbine Exhaust Expansion Joint with Hot to Cold Frame. 25 in wc at 527°C (980°F)



2440 mm (96") square boiler flue gas expansion joint. 20 in wc at 427°C (800°F)

"...Excellence with Experience"



Bachmann supplies a full range of expertly engineered, custom designed and manufactured dampers to the power industry and heavy industrial markets such as Pulp & Paper, Mining, and Petrochemical-Chemical Processing.

- Guillotines
- Louvers
- Diverters
- Butterflies
- Poppets
- Specialty

We are a financially strong, responsive, service-oriented company offering long term proven technology coupled with current, state of the art advances in design and production techniques. We can and will truly customize to your unique system design needs.

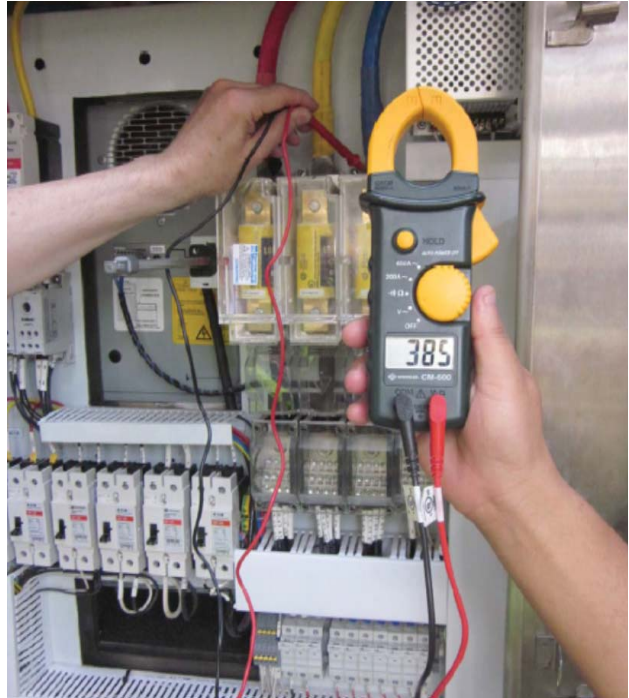


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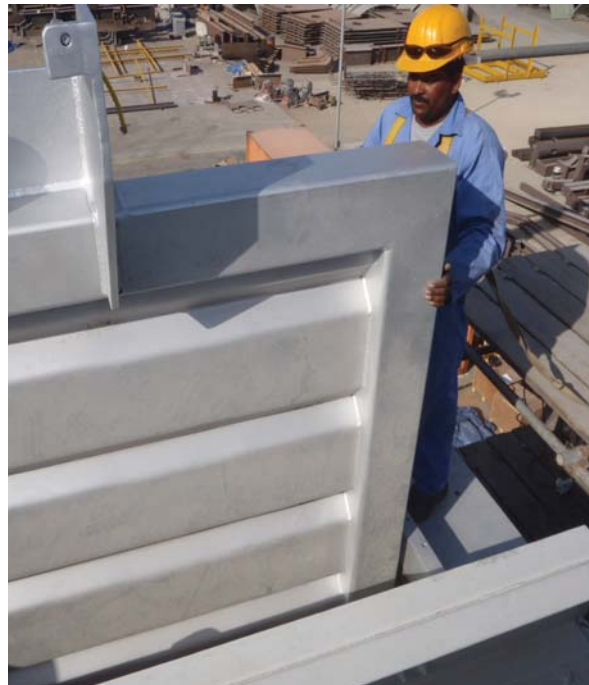
BACHMANN™

Technical Services & Plant Surveys



Bachmann Industries offer Professional Plant Surveys, performing hands-on system walk-downs and evaluations of all types of power and industrial plants. We specialize in objective, unbiased surveys on combustion systems, exhaust duct systems and associated components. Typical surveys are:

- Technical Field Service Supervision and Assistance
- Problem Solving/Troubleshooting Surveys
- Specification Development
- Corrosion Surveys
- Efficiency Surveys
- Modernizing Review Surveys
- Maintenance Surveys
- Vendor Expediting Service
- General Plant Survey, General Condition of Plant



"...Excellence with Experience"

Excellence with Experience...

From Design to Installation and Operation



Bachmann Industries, Inc.

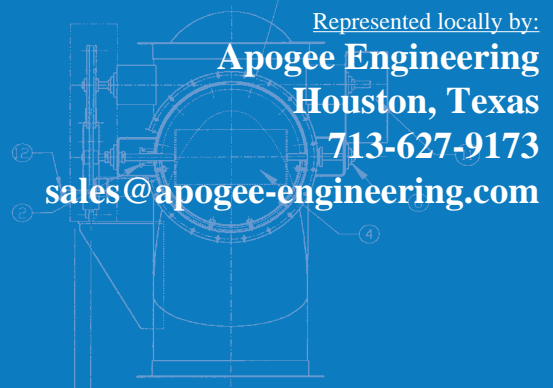
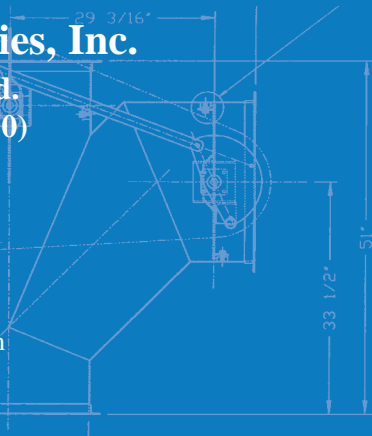
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