

Dampers & Expansion Joints for HRSG Systems



EFFOX INC.

Quality Flue Duct Components for Gas Turbine Systems

Dampers & Expansion Joints for HRSG Systems

A World of Expertise

Our industry-leading size and HRSG experience enables us to quickly and efficiently address all your Damper and Expansion Joint needs. We incorporate a comprehensive engineering and manufacturing approach to provide the most reliable solutions for your HRSG requirements. EFFOX is the one source for all your Damper and Expansion Joint needs.

- EFFOX has over 20 years experience with elevated flue duct temperatures over 1000° F and damper blade span applications in excess of 20 feet.
- EFFOX offers complete design, engineering, and manufacturing services with a staff of over 120 professionals worldwide.
- EFFOX provides cost-effective solutions by packaging both damper and expansion joint products within a single, one-source contract.
- EFFOX offers oversized shipping capability for fully assembled components and cost savings.

Diverter

The diverter is an isolation device that can be used for HRSG flue duct applications. EFFOX manufactures a low leak and a zero leak style diverter. The low leak design is used when a small amount of flue gas leakage can be tolerated across the closed diverter blade. This amount of leakage is usually less than one percent of flow. The zero leak design is used when flue gas leakage past the closed diverter blade is not allowed. Zero leakage is achieved by seating the diverter blade against a seal air chamber pressurized with ambient air.

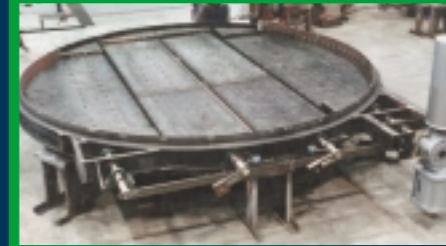


Bypass Stack



Stack Isolation Dampers

These dampers are used to protect the exhaust system from the elements and reduce the stack effect when the system is off line. The design can be equipped with adjustable counter-balances for pressure relief applications. Electric, pneumatic or manual actuation is available.



Stack Isolation Damper

HRSG Stack

Gas Turbine

Diverter

HRSG System

A World of Safety

- 300% safety factor on drive sizing
- 200% safety factor on seal air volume at a minimum of +3 inches w.g. above system pressure
- Maximum 60% of yield stress on all components

Expansion Joints

EFLEX™ expansion joints incorporate the latest advancements in fabric composition and materials technology. EFFOX can provide EFLEX™ Expansion Joints factory mounted to our dampers, minimizing field installation costs and problems associated with mismatched flanges.



 Dampers
 Expansion Joints

Accessories

EFFOX custom designs and fabricates Slide Gates and Louvers (both low leak and zero leak designs), Manual Blanking Plates, Transitions and other specialty items for HRSG applications.



A World of Solutions



A World of Benefits

- Worldwide operating experience
- Financial stability
- Leading edge design and engineering
- Fully equipped manufacturing facility in the U.S.
- Worldwide manufacturing capability
- Domestic and International field service capability

A World of Service

• Quality Assurance Program

Quality assurance is in accordance with ISO 9001 guidelines. All welding processes are qualified per AWS D1.1 and ASME Section IX.

• Product Testing

We have the ability to test our products at temperatures up to 1500°F (815°C) and at system operating pressure.

• Retrofit/Repair Capability

Field service is available worldwide from our global field service network for repairs, alterations or replacement regardless of the original manufacturer.

EFFOX INC.



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Slide Gate Dampers

Isolation capability with minimum pressure drop across the dampers. Available in low leak and zero leak designs.



Louver Dampers

Parallel blade design offers tight shut-off. Opposed blade design offers flow control capability. Double and tandem louver designs offer zero leak isolation.



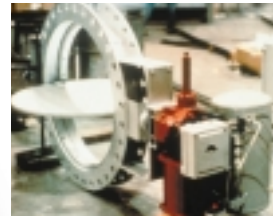
Diverter

Provides extremely high-sealing efficiency in systems that require a through flow with bypass capabilities. Commonly used in HRSG applications.



Wafers

Cost-effective tight shut-off capability for round ducts.



Radial Vane Dampers

Fan inlet control capability.



Stack Isolation Dampers

Cost-effective shut-off and weather protection capability. Commonly used in HRSG and industrial boiler applications.



Flue Duct Expansion Joints

EFLEX™ expansion joints incorporate the latest advancements in engineering and materials technology. Available for design applications up to 2000°F.

