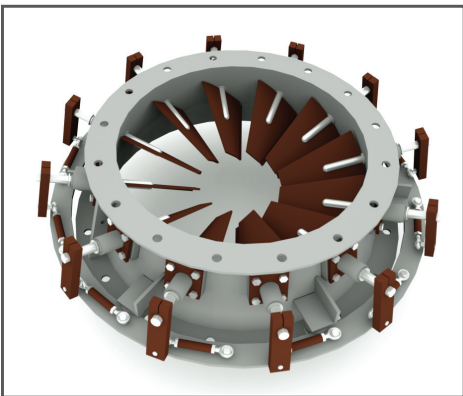
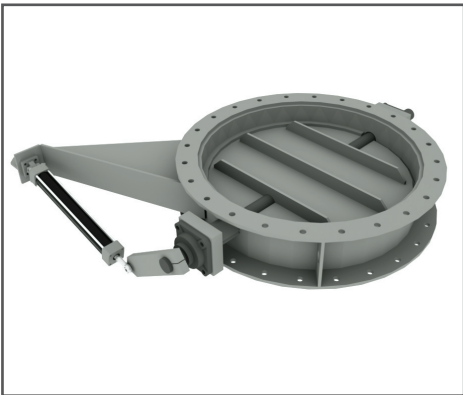
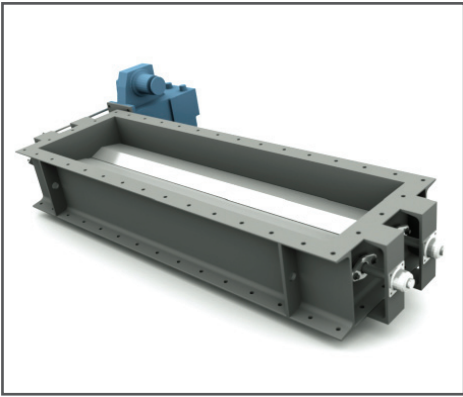
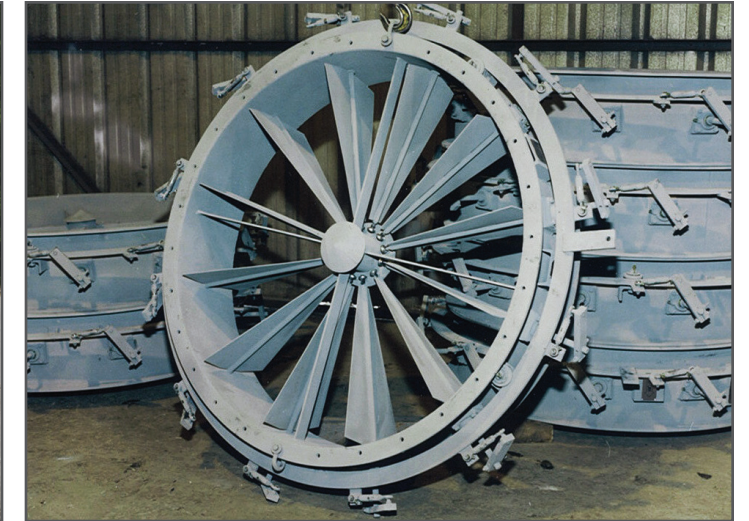


# Dampers





ProcessBarron is a leader in the design, fabrication, installation, maintenance, and repair of air, flue gas and bulk materials handling system equipment. From our production facilities near Birmingham, Alabama, we offer a wide range of manufactured products and turnkey services to our customers in a variety of industries including power, biomass, textile, pulp and paper, iron and steel, cement, lime, petrochemical, chemical, foundry and mining.



## COMPANY EXPERIENCE

At ProcessBarron we have assembled a skilled team of craftsmen and engineers who design and manufacture an array of dampers and related equipment, including fan inlet/outlet dampers, isolation slide gate dampers, system control dampers, specialty dampers and damper actuators (electric, pneumatic, hydraulic, and manual gear) for all heavy industrial and utility applications.

Our expertise includes complete new applications, retrofitting upgrade equipment into existing spaces and providing readily available parts for any emergency. All custom dampers are designed, manufactured, shop assembled, and tested in-house at our Alabama facilities.

Field crews are available for complete turnkey installation, start-up of equipment, on-site inspections and a detailed evaluation of your current damper needs.

Technical assistance and custom-designed damper specifications are provided through our sales and engineering departments. ProcessBarron is just a phone call away. Make your next damper project a success by making the call to us today...

## WHY USE A DAMPER?

A damper silently performs one of the toughest jobs in your process. It is expected to work flawlessly when called upon yet it might be idle for months. With this in mind, quality in engineering and manufacturing can be the difference between reliable operation and a forced outage.

At ProcessBarron we provide dampers for:

- System Control and Modulation
- Zero Leakage Capability
- High Temperature Applications
- High Differential Pressures
- Corrosive/Abrasive Environments
- Custom Applications



## EMERGENCY REPAIR SERVICES

ProcessBarron provides fast emergency repair services. Don't lose valuable time and money waiting on non-responsive service from large repair companies, or wasting time with those not truly equipped to handle systems and equipment of your size or complexity.

Our sales engineers are available after hours if you have an emergency and need immediate on-site equipment repair.

For emergency repair, call: 800-226-3267. 24 hours a day, 7 days a week.

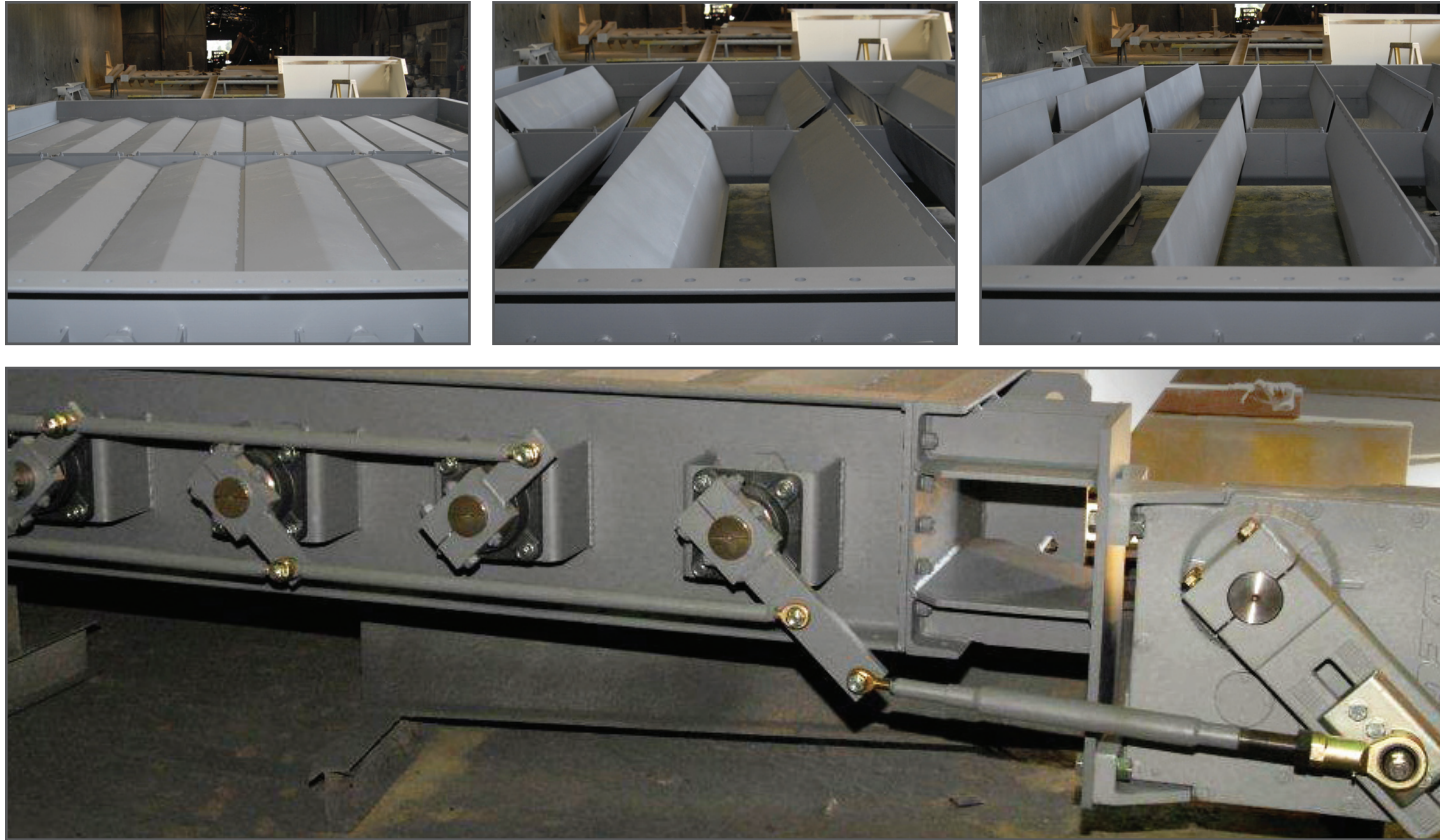


## DAMPER TYPES

- **LOUVER DAMPER:** ProcessBarron manufactures both opposed blade and parallel blade louver dampers for open-close service, fixed flow balance control, and variable air flow control.
- **BUTTERFLY DAMPER:** Available in round, square, or rectangular blades, butterfly dampers are single blade, low or minimum leakage dampers that are well suited for open-closed service or flow control balancing.
- **VORTEX VANE DAMPER:** Vortex dampers are used at the fan inlet to spin the entering air or gas in the direction of fan wheel rotation. ProcessBarron offers cantilevered and center hub support blade designs.
- **SLIDE GATE DAMPER:** Also called guillotine dampers, slide gate dampers are primarily used for fan, boiler, baghouse and precipitator isolation purposes and are available with zero or low leakage blades.
- **DIVERTER DAMPER:** For heat recovery systems, the flow diverter damper will direct the gas to a waste heat recovery system or in a bypass mode through a silencer or stack.
- **SPECIALTY DAMPERS:** Designs for many applications are available, built according to customer specifications for pressure, temperature, airflow regulation, and other critical operational requirements.







## LOUVER DAMPERS

Parallel Blade Louver Dampers are available for open-close service, fixed flow balance control, and for use as a variable control damper at the inlet box of a fan to pre-spin the air entering the fan wheel.

- Multi-louver parallel blade fan inlet dampers, with airfoil blades, provide excellent fan control. High strength adjustable blade linkage with self-aligning rod ends is available, in addition to refractory lining for operation in high-temperature conditions.
- Multi-louver parallel blade isolation dampers for open-close service or fixed flow balance control are manufactured with stainless steel spring seals and are designed to reduce leakage to less than 1%. Self-aligning blade shaft packing glands are available to maintain exact concentricity of the packing to the blade shaft at all times, providing maintenance-free service.

Opposed Blade Louver Dampers are used where the system requires air flow control or balance and can be used for on-off service.

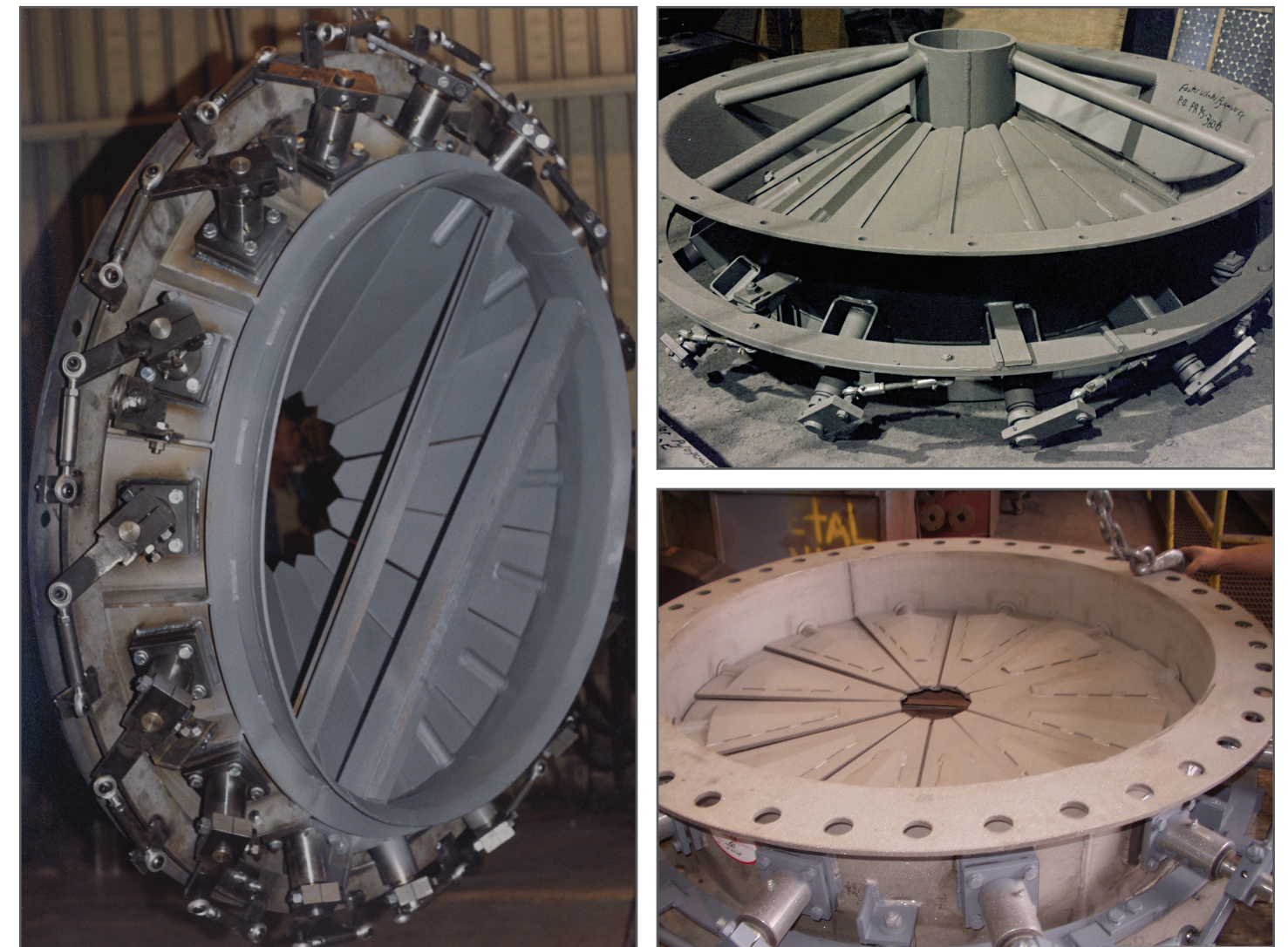
- Fan outlet multi-louver opposed blade dampers are designed to provide balance flow control. Heavy duty adjustable blade linkage with high strength spherical rod ends provide precise blade movement, while self-lubricating high temperature spherical carbon sleeve bearings running on stainless steel shafts allow for maintenance free service. Internal stainless steel spring seals can be used to furnish tight shut-off, allowing isolation of the fan.

## VORTEX DAMPERS

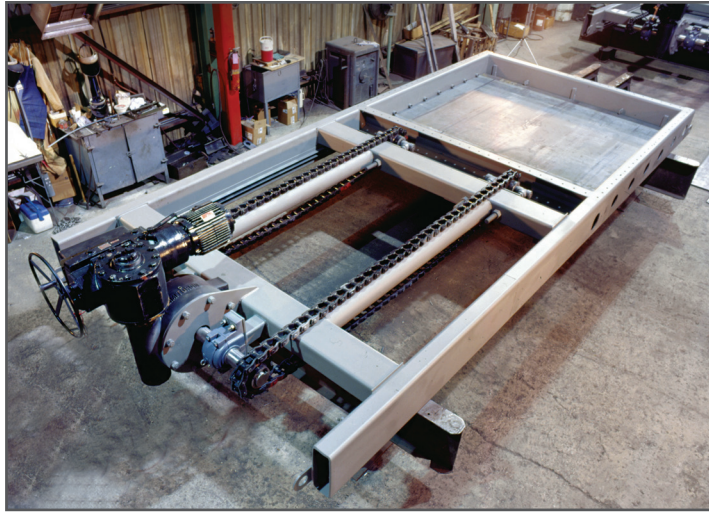
Vortex dampers are used at the fan inlet to spin the entering air or gas in the direction of fan wheel rotation. Depending on damper size and operating conditions, ProcessBarron offers cantilevered blade and center hub support blade designs. Vortex dampers, also known as variable inlet vane dampers (VIV), are most commonly associated with fan inlets handling clean flue gases less than 500°F.

Additionally, the blade shaft bearing and operating linkages can be serviced without removing the damper from the fan or connected duct system. The damper housing can be provided with two bolted splits 180° apart to allow for convenient installation on existing fans without removing the fan rotor assembly.

- Cantilevered blades with integral inlet cones are used for applications where a more precise pre-spinning of air is required. Dampers of this design can be used with single and double inlet fans.
- Center hub vortex dampers are designed for clean air fans operating at high static and velocity pressures. The center blade hub incorporates spherical sleeve bearings, which are high-strength, self-lubricating, and self-aligning for easy maintenance.





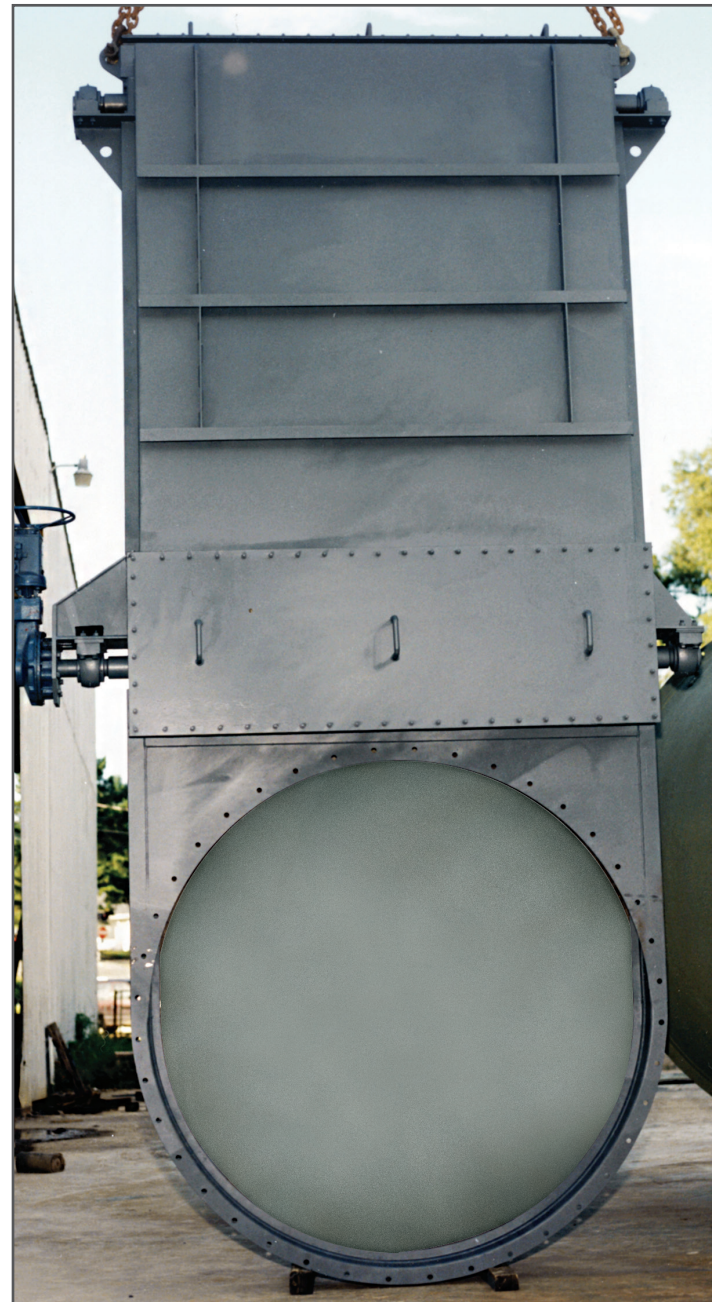


## SLIDE GATE DAMPERS

ProcessBarron slide gate dampers incorporate self-cleaning stainless steel blades and atmospheric seals for easy maintenance and adjustment.

All of our slide gate dampers are designed to customer specified applications and metallurgies and are available utilizing machine screw or chain drives.

- Low leakage slide gate dampers are available with self-cleaning stainless steel blade seals incorporated around the full inside perimeter of the damper frame. The atmospheric blade seal is furnished along the face and edges of the damper blade to minimize leakage into or from the atmosphere.
- Zero leakage slide gate dampers are used when isolation is required for a system, by employing dual blades that provide an air chamber achieving zero leakage. Machine screws with protective boots and electric motors are supplied for open-close service. An isolation valve is furnished to prevent flue gas leakage to the atmosphere when the seal air fan is not operating.



## DIVERTER DAMPERS

Flow diverter dampers are commonly used throughout process recovery, heat recovery, and turbine exhaust systems to direct gas flow in one or two directions.

Flow diverter damper metallurgies are designed based on system design, pressure, temperature, and chemistry of the system or gas stream. These systems are fully assembled and operationally tested by experienced engineers prior to shipment or installation.

For heat recovery systems, the flow diverter damper will direct the gas to a waste heat recovery system or in a bypass mode through a silencer or stack. These diverter dampers can be manufactured with a single end pivoted blade to direct gas flow into one of the two damper outlets.

The turbine exhaust diverter damper can be furnished complete with two dampers, T-duct sections, expansion joints, and damper actuators with fail-safe systems.



## BUTTERFLY DAMPERS

Butterfly dampers are single blade, low or minimum leakage dampers that are well suited for open-closed service or flow control balancing.

ProcessBarron butterfly damper designs include:

- Round, square, or rectangular blades.
- Electric, pneumatic, hydraulic, or manual gear actuators with pneumatic or electrical positioners for effective damper control.
- A high-temperature butterfly damper model with refractory lining on the blade and interior of the housing is available for elevated temperature applications up to 1400°F.
- Dampers furnished with stainless steel heat compensating blade seals.

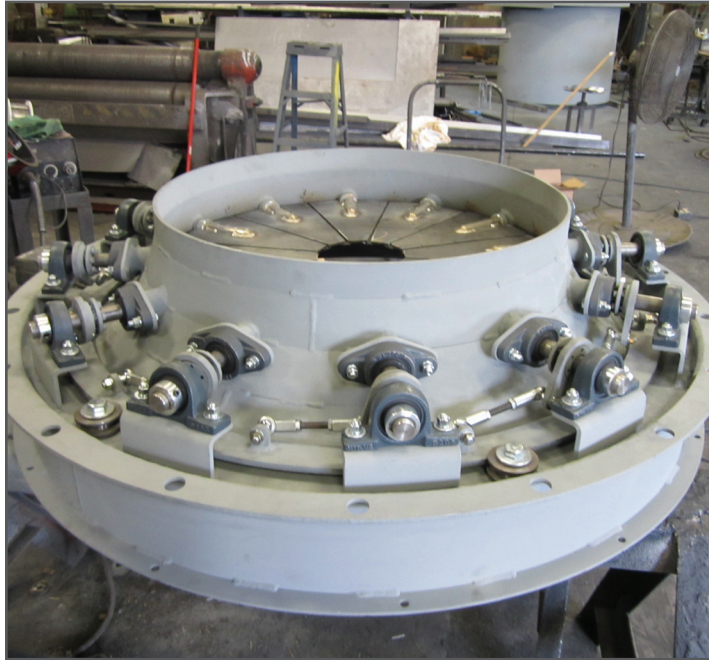


## SPECIALTY DAMPERS

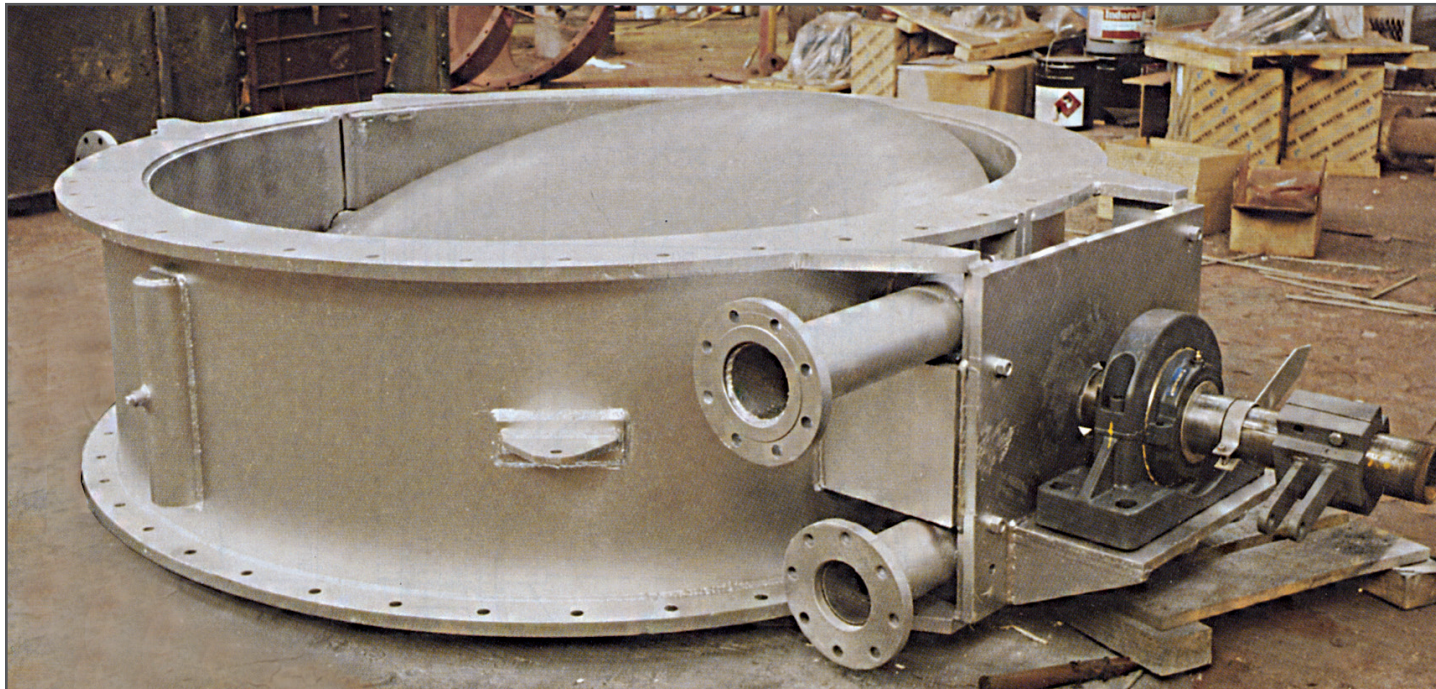
A variety of custom-designed dampers for many applications are available, built according to customer specifications of pressure, temperature, airflow regulation, and other critical operational requirements. Technical assistance is provided through our sales and engineering departments for support in generating specifications for procurement of specialized dampers.

Additionally, we possess the in-house technical expertise to manufacture dampers in exotic materials for highly corrosive and elevated temperature environments.

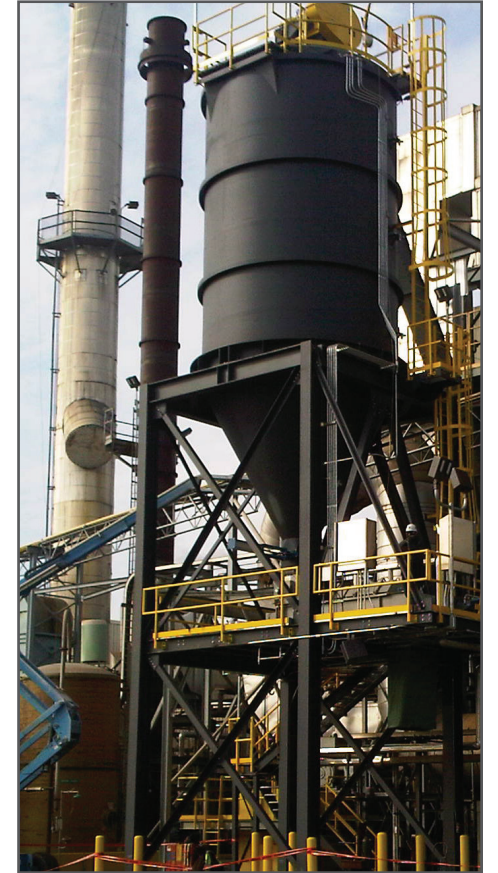
BURNER REGISTER DAMPER



STACK CAP DAMPER



WATER-COOLED BUTTERFLY DAMPER



## FIELD SERVICES

ProcessBarron's Field Service department specializes in the turnkey installation of our equipment. Our in-house field service department is also available to inspect and perform maintenance on existing equipment and can provide a detailed evaluation of your current air and material handling system problems and needs.

- Turn-key installation of new air system and material handling system equipment
- On-site inspection, measurement and thorough analysis of existing equipment
- Air flow measurement and reporting
- Preventive maintenance
- Efficiency upgrades
- Laser alignment and fan balancing services
- 24 hour emergency equipment repair at 1-800-226-3267

## COMPANY REPRESENTATIVES

With over 60 representatives located in North America, South America, Central America and the Caribbean, ProcessBarron can typically evaluate your industrial equipment needs within 24 hours.

To contact a representative please call 888-663-2028 or visit our website at [www.processbarron.com](http://www.processbarron.com).





PO Box 1607 | Pelham, AL 35124 | 888-663-2028

[www.processbarron.com](http://www.processbarron.com)

For emergency repair call 800-226-3267

## COMPANY SERVICES

### Fuel & Ash Handling Systems

- Underpile Reclaimers
- Live Bottom Fuel Metering Bins
- Material Screening & Hog Towers
- Heavy Duty Screw & Drag Conveyors
- Underpile Drag Chain & Screw Conveyors
- Ash Storage Silos
- Ash Unloading & Conditioning Equipment
- Double Dump Valves & Rotary Feeders

### Air & Gas Handling Systems

- Mechanical Draft Fans (Induced & Forced Draft)
- Boiler Upgrades & Stokers
- Economizers & Tubular Air Heaters
- Multiclone Dust Collectors
- Dampers & Expansion Joints
- Ductwork & Exhaust Stacks
- Draft System Assessment
- Efficiency Upgrades

24hr. Emergency Repair Services Available

DESIGN • ENGINEER • FABRICATE • INSTALL • SERVICE • REPAIR • REBUILD