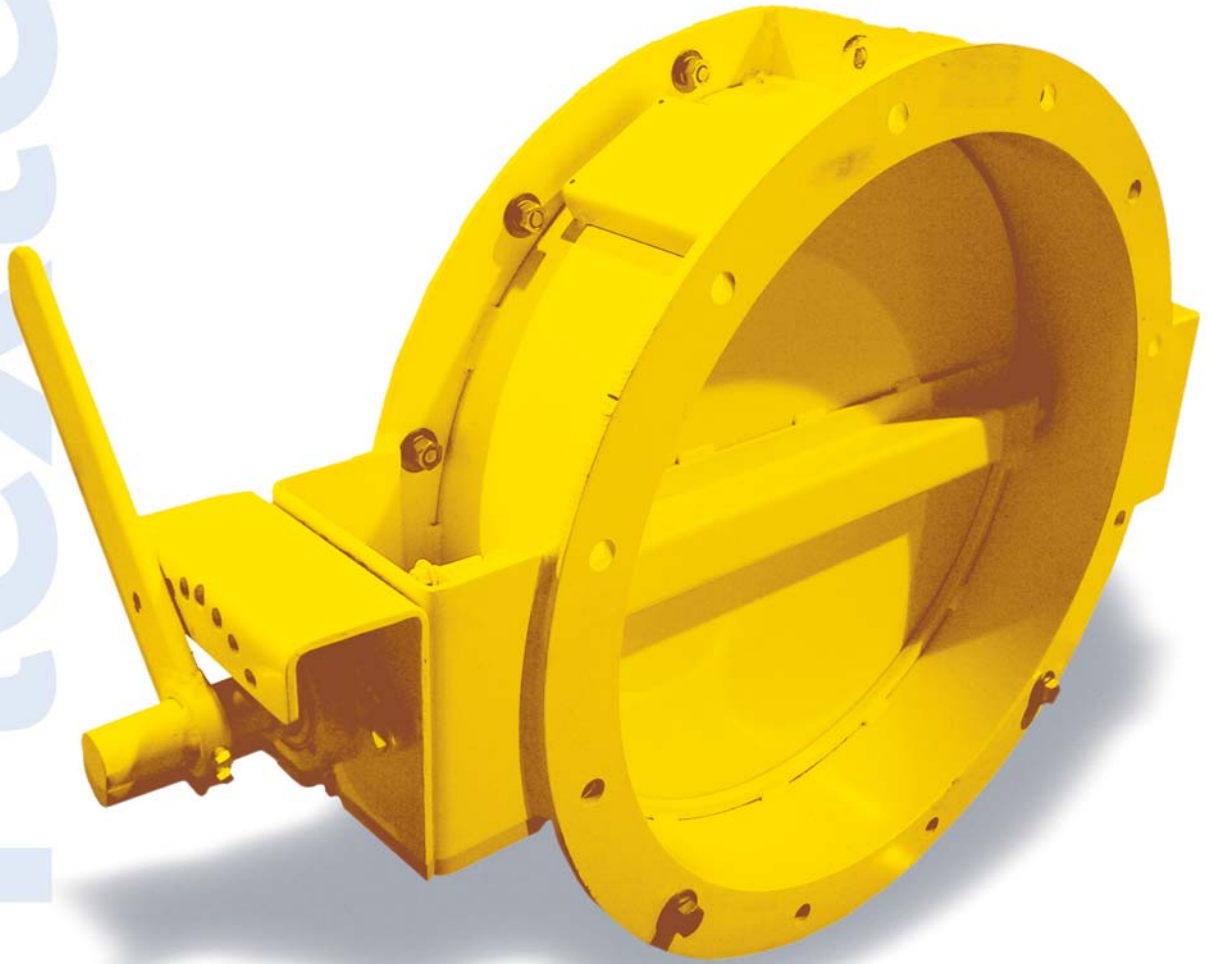


FIELD-PROVEN / PEAK PERFORMANCE

WARRIOR SERIES

BUTTERFLY DAMPERS

Flextech



WE MANUFACTURE EXCELLENCE

BUTTERFLY DAMPERS

Reliable flue gas isolation - relatively light weight, simple, low cost

Flextech Industries' butterfly dampers are available for a wide variety of applications in round ductwork where low leakage isolation, flow control or a combination of the two is desired. Flow characteristics are close to that of a single-blade louver. Varying degrees of isolation can be obtained from 90 to 99.9% depending on the seal arrangement.

Shaft Seals

Flextech Industries' provides a low-cost heavy-duty design suitable for applications with clean, corrosive, dirty and or dry environments. Our design can be utilized for applications up to 2000 °F gas temperature. Flextech butterfly dampers are equipped with a standard outboard bearing and frame mounted shaft seal arrangement. This arrangement allows for packing replacement without bearing removal.

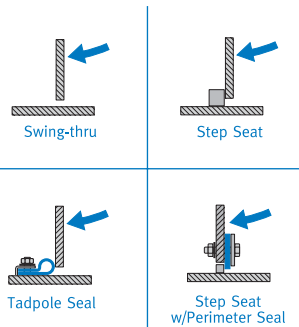
Flextech Industries offers four seal designs for butterfly dampers:

Swing-through Seal

Used in extremely dirty applications where tight shut-off is not required. The gap around the blade can be increased or decreased to suite customer need. This design can be used in applications up to 2000 °F.

Step Seat

Standard for butterfly dampers. Recommended for relatively clean flue gas applications, with up to 98% sealing efficiency. This can be used in designs up to 2000 °F. This design utilizes a rolled bar welded to butterfly housing at the blade-closed position.



Tadpole Seal

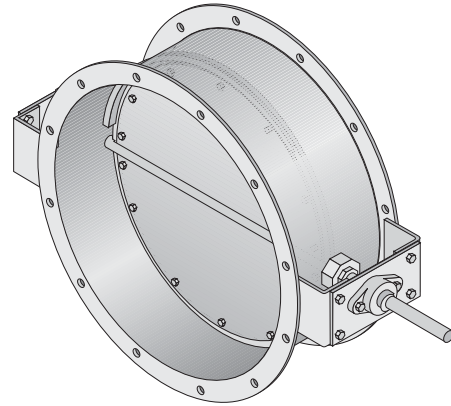
Also recommended for relatively clean applications - when tighter leakage rates are required. The tadpole seal is constructed of a woven high temperature silica cover with a silica rope bulb. This can be used in designs up to 2000 °F. Provides up to 99.5% sealing efficiency.

Step Seat with Perimeter Seal

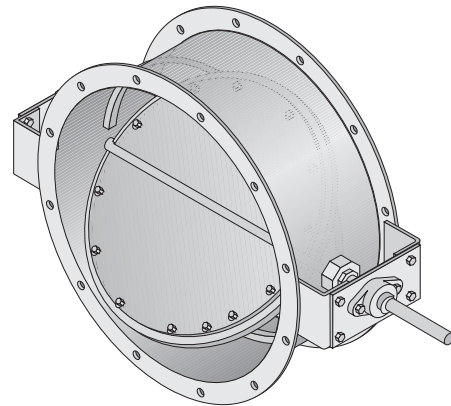
Recommended for clean applications. Similar to the step seat, with the addition of an elastomeric perimeter seal bolted onto the blade. Sealing efficiencies rival those of the tadpole seal. Maximum design temperature is 400 °F.

Advantages of Flextech Butterfly Dampers:

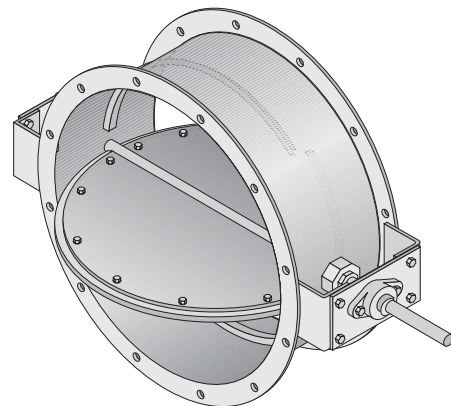
- Excellent for isolation
- Fast operating speeds
- Little or no outside space required for support structure
- No leakage to ambient
- All blade seals are internal to the frame and shaft seals are externally mounted for easy access.
- Lower cost - easily maintained



Closed Position



50% Open



Open Position



BUTTERFLY DAMPER APPLICATIONS INCLUDE:

– scrubber systems – stack isolation – control air systems – balancing systems – incinerators – baghouse

WARRIOR SERIES

Warrior Series butterfly dampers are custom-engineered and manufactured in many configurations depending on the application and performance dampers consist of a housing or frame with or without flanges, a flat plate and shaft assembly, shaft packing glands to prevent leakage to ambient, and outboard mounted maintenance-free bearings.

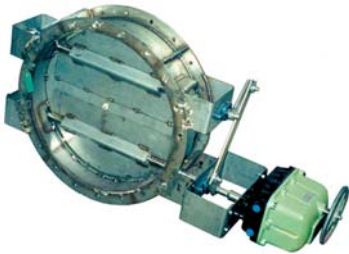


HVAC / LIGHT DUTY SERIES

Flextech Industries offers a standard line of butterfly dampers featuring low cost and quick deliveries. This design offers carbon or stainless steel construction, a metal step seat seal and manual quadrant actuator. These dampers are designed for temperatures up to 200°F as a standard (with excursions to 400°F, under certain circumstances).

Single Plate Disc

Standard blade for all round dampers. Utilized for high temperature and low pressure flue gas applications. Available in continuous shaft and stub shaft configurations.



Reinforced Single Plate Disc

Suitable for higher pressure applications. Structural reinforcements are applied to the face of the disc in an aerodynamic shape to minimize flowing pressure losses and maintain good control characteristics.



Blades

Single blade discs are the standard design. When modulations or flow control is required, a second plate disc design is available.

Actuator Systems

The following actuator options are available with Flextech butterfly dampers:

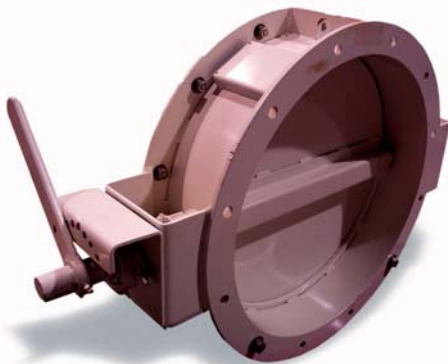
- Manual - Locking hand lever or quarter turn gearbox types
- Pneumatic - Cylindrical or quarter turn types.
- Hydraulic - Cylindrical or quarter turn types.
- Electrical - Quarter turn types only.



Manual Actuator



Electric Actuator



Butterfly Damper Materials

FRAME AND BLADE MATERIALS:

- ASTM A36 Carbon Steel
- ASTM A242/588 COR-TEN Steel
- 304 and 304L Stainless Steel
- 316 and 316L Stainless Steel
- Hastelloy™ C276
- Other materials available



Hydraulic Actuator



Pneumatic Actuator



WE MANUFACTURE EXCELLENCE

Damper Inquiries: Clinton, Missouri, 64735. Toll Free 1.877.838.3539
In Canada call 1.800.830.3539



WE MANUFACTURE EXCELLENCE

FLEXTECH INDUSTRIES' PRODUCT LINE INCLUDES:

- metal bellows expansion joints
- fabric, rubber & teflon expansion joints
- flexible hose products
- piping accessories



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Canada Office / BC Plant

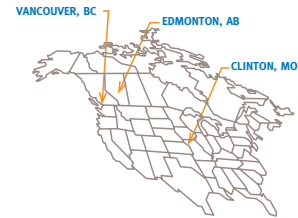
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Toll Free Sales: 1.877.353.9832
Email: ab.sales@flextech-ind.com



DAMPER REPAIR AND REFURBISHMENT SERVICE

When regular inspection detects parts that need replacement contact Flextech Industries for damper refurbishment and parts maintenance service, including - controls, hose, fittings, bearings, packing and actuators. Ask us about any installed damper. Contact Flextech to discuss a site inspection or fax drawings, attention, "refurbishment" to: 660.885.6852



Ask for on-site demonstration.

We will bring a full-size Guillotine damper to your facility and demonstrate our patented Bellowseal® design - the tightest seal in the industry. Call 1.877.838.3539

