

Senior Flexonics Pathway – Metroflex Dampers has supplied thousands of Flex-Seat Guillotine Dampers since 1976 and continues to be the technological leader in duct isolation technology.

### DESIGN OVERVIEW

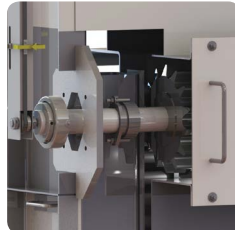
SFP Metroflex Dampers' Flex-Seat Guillotines are designed for isolation of gas flow system components such as; Electro-Static Precipitators, Flue Gas Desulfurization systems, Gas Turbines, Fans, Boilers and other processes.

Components can be fabricated at our Maine or Texas facilities, or any one of our approved international subcontractors.

### RACK AND PINION DRIVE 1

SFP Metroflex Dampers' Rack and Pinion Drives are self-cleaning and maintenance free, operating without the need for lubrication or adjustment.

The Rack and Pinion drive is designed to cycle in very harsh environments without clogging or fouling. Dampers can be arranged in both horizontal and vertical ducts.



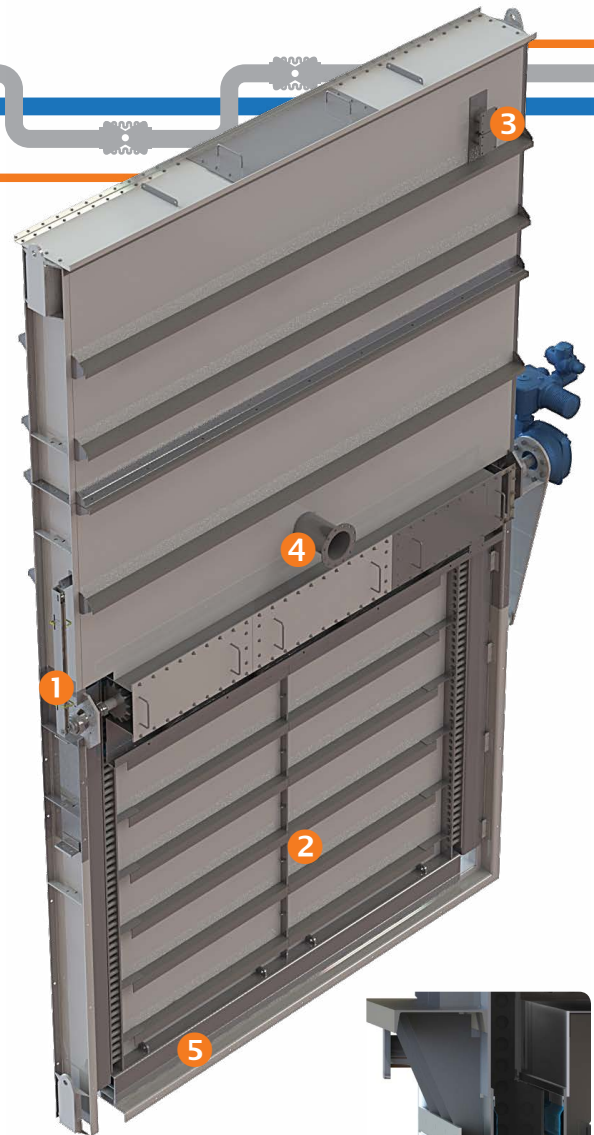
### ENGINEERED/FABRICATED BLADE 2

The Flex-Seat guillotine uses a unique compound blade design. The blade periphery is constructed of heavy structural channel shaped members supporting a reinforced membrane section. This design makes the blade both structurally rigid to withstand system pressures and torsionally flexible to resist binding.

### FLEX-SEAT SEALS

SFP Metroflex Dampers' Flex-Seat utilizes a convex shaped work hardened seal located in the gas path in lieu of an external frame cavity seal chamber that can clog with particulate and deform the seals in relatively short service time.

The one piece Flex-Seat seal acts as a labyrinth that restricts cross blade leakage in both directions. The seal is rigidly backed by an inverted channel that both restricts seal movement and acts as a blade guide.

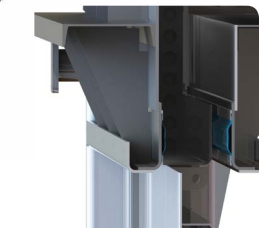


### ENCLOSED BONNET 3

The gas tight bonnet provides integrity to the duct system by not allowing leakage to or from the damper to atmosphere. Dual Throat seals at the bonnet entrance reduce the amount of seal air required in the open position.

### SEAL AIR SYSTEM 4

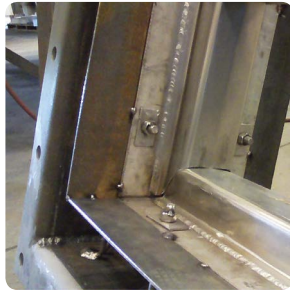
100% cross blade isolation is achieved by use of a seal air fan system. The Flex-Seat blade and seal create a seal cavity into which seal air is introduced in the closed position. This pressure barrier prevents cross blade leakage of flue gas in the closed position.



## FRAME DESIGN 5

The Flex-Seat frame is a Hot Design that reduces corrosion and the amount of Seal Air required in the open position.

It is referred to as a Hot Design because there are no external seal cavities that need purging with ambient seal air while the damper is in the open position.



Because there are no seal cavities, there is no area to collect ash and sludge deposits, and corrosion attack of the metallic seals is mitigated.

## ISOLATION GUILLOTINES



## GUILLOTINE DESIGN

SFP Metroflex Dampers' Flex-Seat Guillotine utilizes a unique rack and pinion drive system, an engineered compound blade, our unique convex Flex-Seat seal, and a gas tight enclosed bonnet for 100% duct and atmosphere isolation.

The Flex-Seat seal allows for tight shutoff and 100% isolation with the use of a seal air system.

This advanced design does not require heated seal air.

Our Rack and Pinion drive allows for smooth, self-cleaning, and maintenance free operation.

The unique compound blade design allows for even temperature distribution, preventing binding and warping due to thermal expansion.

## ON-SITE SERVICE (OSS)

As one of the worlds' largest damper designer and manufacturers, SFP provides a turn-key solution which incorporates OSS for inspection, erection or project supervision and management.



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